

# AMERICAN SURVIVAL GUIDE

## IN DEATH'S GRIP

HOW TO  
SURVIVE,  
EVADE,  
RESIST,  
ESCAPE

## LOST IN THE WILD

*Navigate  
Without a  
Compass*

### GEAR GUIDES

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QUICK  
SNACKS ON  
THE RUN

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SELF-  
DEFENSE  
WEAPONS

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POCKET-  
SIZED FIRST  
AID KITS



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Defense  
Tactics**

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and  
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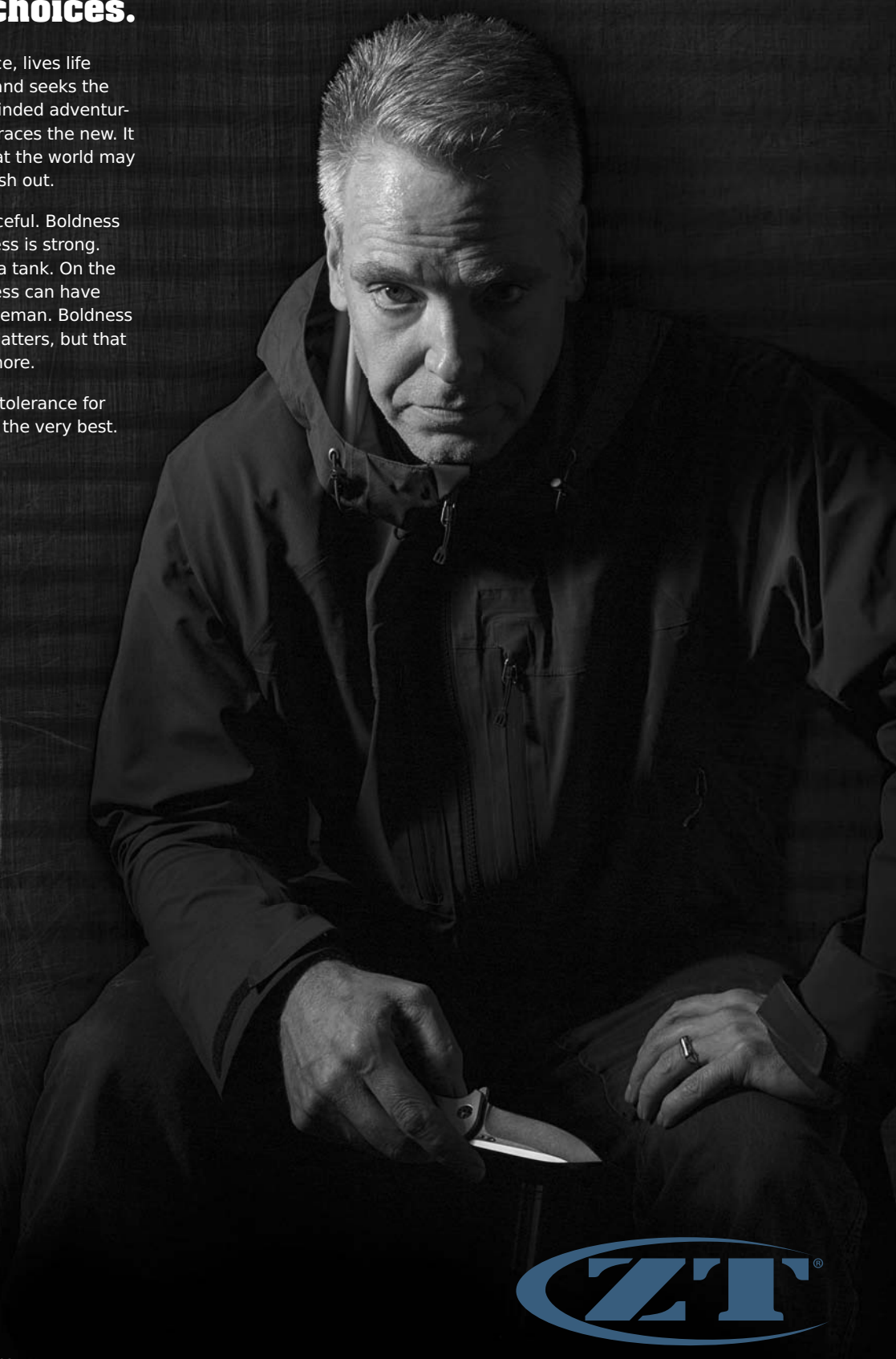
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#### THE COVER:

Veteran Navy SEAL Andrew Arrabito stands before a crumbling city with Echo-Sigma's Get-Home Bag, his Half Face Series 2 Crow Scout knife and a Russian sawed-off 12-gauge shotgun at the ready. His company, Half Face Blades, produces usable and versatile custom knives meant for avid adventurers, outdoorsmen, and survivalists. The Get-Home Bag courtesy Echo-Sigma; and the Chieftain knife courtesy Steel Will.

Photo: HENRY Z. DEKUYPER  
Design: JESSE CAO



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**Ryan Lee Price**  
rprice@EngagedMediaInc.com

# The Survival Spectrum

THE SURVIVAL SPECTRUM is a high-level look at how you see yourself as a survivalist, a prepper or just an avid outdoorsman, and it is on this spectrum that you can compare yourself with others. Let's say it is a scale from one to 10, 10 being you're likely to wear a tinfoil hat to Thanksgiving dinner for fear of aliens homing in on your brainwaves, whereas a one is someone who believes being prepared is keeping your cell phone fully charged and a bandage somewhere in your wallet.

Near one end of the spectrum — say around an eight or nine — there are individuals who feel the world will come crashing down around us in one fell swoop, like from the natural catastrophe of an asteroid strike or a solar flare, ending life as we know it in a single day or two. This person prepares especially for that, strongly believing there's only one shot at survival and it will be thrust upon us quickly, severely, and suddenly. He is surprised more people don't see it coming. From where he stands, we're all doomed except for the most prepared of us all. Have you a fall-out shelter? Have you 20 years of food and water?

Near the opposite end of the spectrum — at about a three — is the enthusiastic outdoorsman, keen on learning which plants are edible and the best method for finding water in the desert. He keeps a bug-out bag stocked but in the back of the closet, and a well-thought-out but modest first aid kit is one of the first things he packs when going camping for the weekend. The world will go on spinning around the sun, and he is concerned not with the political climate in the Middle East nor of the debate over Ebola.

Where do you fall? If you're like me, you're probably somewhere nearer the 10 than the one, otherwise you wouldn't be reading this magazine. To put a finer point on it, answer these questions: Do you think about what ifs and could bes when you are planning a cross-country driving vacation? Or do you think of what ifs when you look at the instability in the world today? Where you stand on the survival spectrum greatly affects how you view a lot of life and the world around you. Survival and preparing to survive, be it in the form of education, collection, and readying yourself and those around you for what amounts to an inevitable situation — from a lost-in-the-woods scenario to the polar ice caps are melting and by this June our house will be underwater — is important to our lives. But how important?

Most of us, if pressed, would be in the six to seven range. We understand certain situations in the world, though completely out of our control, will have a drastic impact on our lives. We know the threat of nuclear annihilation is scarce or the ice caps melting is far-fetched in our lifetime but not out of the realm of possibility; therefore, we know the quickest way away from city centers and where high ground is. We have an impressive collection of gear, and we are prepared to defend our homes, our families, and our means of survival. We are strong willed, knowledgeable, and not easily deterred.

No longer are we afraid of earthquakes or tornadoes, floods or blizzards because we know what to do, have the correct gear for the job, and have the wherewithal to overcome whatever obstacle man, machine, or Mother Nature throws our way. We're survivors. **ASG**

*Ryan*

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### WHEN ALL HELL BREAKS LOOSE

by Cody Lundin

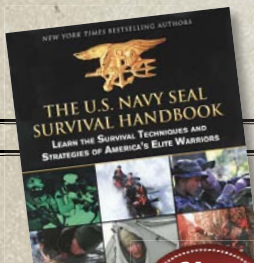
ITEM #12-0007

This isn't your father's boy scout manual or a FEMA handout. From the basics such as shelter, water, food survival kits, and first aid, to survival exotics such as building a makeshift toilet, catching rodents for food, and safely disposing of a corpse. When All Hell Breaks Loose is the first book to concisely and humorously outline a simple survival system using everyday household items to survive catastrophes from Los Angeles to Paris and everywhere in between. So ditch the fear-mongering and paranoia, lower the shotgun, and immerse yourself in the most common-sense, in-your-face book on preparedness yet!

### THE US NAVY SEAL SURVIVAL HANDBOOK

ITEM #12-0023

Don Mann has assembled the best global survival manual there is today, and draws upon extensive operational experience as a Navy SEAL to hammer home the lessons rather than being another checklist of skills like so many survival books flooding the industry today. Don's wealth of field tested skills has finely honed the art of survival forgotten by the modern world. Mann has written a book that will provide you with practical no nonsense techniques. This book is an absolute must have for every outdoor enthusiast, adventurer or Armed Forces member. It is packed with a ton of useful information on wilderness survival techniques.



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ITEM #08-0192

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Fire Starter System

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The patented Strike Force is an exceptional all-weather flint based fire starting system. The system offers you an all-in-one compact, durable package, with a special alloy flint bar and hardened steel striker. When you scrape the striker down the high performance flint material you generate a spark three times as hot as a standard match which will easily ignite any dry tinder material, or you can use WetFire tinder which burns at more than 1,300 degrees. You won't find a better non-toxic, odorless tinder that actually burns longer when wet. When conditions are at their worst you can count on Strike Force to make you a warming fire. It also is a safe and easy lighter for your backpacking stoves or barbecues. Available in Black or Orange.



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ITEM #03-0197

The Swedish FireKnife™ is a new product by Light My Fire® which incorporates both a Mora Knife and a Swedish FireSteel®, the ultimate way to light a fire in any weather. The 3.75" blade is constructed of Sandvik 12C27 Swedish cold-rolled special stainless steel (Rc 56-58). The handle, with a high friction rubber grip, is comfortable, and safe to use. Profile grinding makes the blade extremely sharp from the factory and is easy to resharpen without special tools. The back of the knife has been ground to work perfectly with the Swedish FireSteel® which is contained in the rear of the handle. The durable Swedish FireSteel® works equally well when wet and creates a 5,400°F Spark. Just twist and pull on the back of the handle to reveal the Swedish FireSteel® which measures .25" in diameter by 1.5" long. Overall measures 8¾"L x 2"W x 1"H.



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- 1 5" Straight Forceps
- 1 5" Curved Forceps
- 1 #3 Scalpel Handle
- 1 Scalpel Blade

- 1 Suture
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### NYLON CORD SURVIVAL BRACELET

With Whistle

ITEM #02-0157

Hand woven nylon cord which can be unwound in survival situations. Use for shelter building, splint lashing, spear attaching, animal snares, etc. Handy emergency whistle built into the side release buckle. One size. Measures 10" overall x 7/8"W x 1/4" thick.



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USA

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### LIFESTRAW WATER FILTER

ITEM #13-0019

The LifeStraw personal water filter, a "Best Invention of the Year" (Time magazine) winner, enables users to drink water safely from contaminated water sources. LifeStraw is ideal for homeowners during emergencies such as local flooding which can contaminate drinking water supplies. LifeStraw is also ideal for campers and hikers who may be drinking from rivers or lakes and are unsure of the water safety. Lightweight and compact makes it great for travelers. The most advanced personal water filter available today. LifeStraw surpasses EPA guidelines for E. coli, Giardia, and Cryptosporidium oocysts, rigorous standards for water filtration.



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### 5 GAL. SOLAR SHOWER

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Our solar shower guarantees a hot shower anywhere; camping, beach or poolside. The Black color absorbs the sun's rays to heat the water (without any batteries!). Easy to operate on/off hose valve and easy to hang, with included cord and hook. Lightweight and compact for easy transport and storage. Stores enough water for 3 - 4 showers. Made of non-toxic PVC. Measures 17"L x 21"H.



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# NEW PRODUCTS

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The Klean Kanteen is about having an alternative to plastic: stainless steel. The Klean Kanteen family started with the world's first BPA-free metal hydration bottle, and it's void of phthalates, lead, and other toxins. Its design—including the threads and lack of sharp angles—prevents gross things like dirt, bacteria, and germs from getting stuck.

## Specifications

- Cap is threadless for tight seal
- Large opening for ice cubes
- Dishwasher safe
- Various sizes, including 64 oz

**kleankanteen.com**  
**\$34.95**

## 2. AUTO SURVIVAL KIT

StatGear's Auto Survival Kit features first aid and survival items. It includes a T3 tactical rescue tool, a reusable glowstick, gauze, bandages, instant ice packs, tweezers, and emergency drinking water. The T3 features a serrated blade, seatbelt cutter, window punch, and emergency light.

## Specifications

- Attaches to passenger survivor
- Also has nitrile gloves and medical tape
- T3 is 6.5x3x1.5 and weighs 8 oz

**statgeartools.com**  
**\$64.99**



### 3. KITCHEN KIT

The Crossover Kitchen Kit from GSI Outdoors features a complete set of kitchen essentials: cooking, spicing, and cleaning. It has folding utensils, a waterproof spice shaker, a towel, dish-soap dispenser, and more.

## Specifications

- nFORM Crossover System Cook-set is modular design
- Compact
- Tote included

**sportchalet.com**  
**\$34.95**



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4

#### 4. SURVIVAL TOMAHAWK

What could make a tomahawk better than a tomahawk? When it also has a reflective handle, a firestarter rod in the handle, a nail puller, a hammering head, and a multipurpose blade. And SOG Specialty Knives & Tools stepped up and did just that by creating the Survival Hawk multi-use tomahawk.

##### Specifications

- Light and compact
- Axe head is 3 in
- Carry sheath included
- Overall length is 12.1 in

[sogknives.com](http://sogknives.com)

\$64



5

#### 5. RECHARGEABLE LIGHTS/CHARGER

Meet the BioLite NanoGrid, an off-grid rechargeable lighting and electronics-powering charger. It's a three-in-one setup, thanks to one PowerLight, and two SiteLights. We're talking about a built-in flashlight/lantern, and stringed dimmable lighting up to 40 feet. Recharge from any USB source,

then share power with any USB-chargeable items you also have.

##### Specifications

- Palm-size
- 4,400 mAh Li-Ion battery
- Lumens: PowerLight, 250 torch/200 lantern
- Lumens: SiteLight, 150 per light

[biolitestove.com](http://biolitestove.com)

\$99.95

#### 6. FOOD DEHYDRATOR

Excalibur is now offering the first stackable food dehydrator. The ECB50B has an adjustable thermostat, allowing you to do fruits, veggies, meats, and herbs. The unit allows for making all-natural yogurts, and two drying trays mean drying liquid mixtures, turning fruit puree into leathers.

##### Specifications

- Dehydrate multiple things without mixing
- Parallex Horizontal Air Flow heat/dry combo system
- Dimensions: 13.5x13x11
- Weighs 9.5 lbs

[excaliburdehydrator.com](http://excaliburdehydrator.com)

\$139.99



6

## NEW PRODUCTS

### 7. EMERGENCY FIRESTARTER

No match or lighter for a fire? No problem. The Zippo Emergency Fire Starter uses a flint wheel to ignite the starter's water-resistant waxed tinder sticks.

#### Specifications

- Entire case is waterproof
- Orange color makes it easy to find
- 3.9 x 6.1, and 3.4 oz

**zippo.com**  
**\$9.95**

### 8. MOBILE HOTSPOT

Needing to stay connected when you're stranded or deep in the woods or the like? AT&T and NETGEAR have created a mobile hotspot for secure Internet access through AT&T's 4G LTE network.

#### Specifications

- Plans connect up to 15 WiFi devices
- Simple touchscreen
- Plans with 16 hours of battery life
- Unite Pro has battery boost for phone



Amazon, Walmart, Best Buy, AT&T stores, or [att.com/unite](http://att.com/unite) | Cost depends on the plan

### 9. SPRAY FIRE EXTINGUISHER

PASS...pull, aim, squeeze, sweep. You're supposed to remember that acronym when there's a fire in front of you and you're using a standard fire extinguisher. But we're kind of digging the putting-out-fires-for-dummies intuitive alternative, the First Alert Tundra Fire Extinguishing Spray: spray, extinguish. It's suited for paper, wood, fabric, electrical, and cooking fires.

#### Specifications

- Also Camp Fire and Auto versions
- Aerosol spray
- Weighs 1.6 lbs
- Biodegradable

**firstalertstore.com**  
**About \$20**



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# 10



## 10. PERSONAL SHELTER

Poler's Mystic Tarpent acts as a tarp and tent: ground cover underneath the company's tents or as a one-person shelter. It's waterproof and actually provides thermal protection. Therefore, it can also be used like a space blanket in an emergency. And the silver side can be a reflector to signal for help.

### Specifications

- Includes two tarps
- Two sizes: 60x85 and 32x85
- Weighs less than 2 lbs

**polerstuff.com**  
**\$70**

## 11. SURVIVAL BIKE

The Survival Bike from Motoped is military-esque and comes with a universal rack, bolt-on mounts, and harnesses. There are also two side-mounted fuel tanks to extend the range to 400-500 miles before a fill-up. Go with the Black Ops Edition Motoped if you want the additional crossbow, knives, shovel, hatchet, and climbing rope.

### Specifications

- 49cc engine for 2.41 hp
- Without your stuff it's 132 lbs
- Wheelbase is 52 inches.
- Max speed is 24 mph

**motoped.com**  
**\$2,499**

## 12. SURVIVAL KIT

The Core Kit from SOLKOA Survival Systems has just about everything under the sun for short-duration needs. Need to signal? There's a mirror and whistle, for starters. Navigation? It includes a compass, scale, waterproof map pouch, and more. Fire? There's a sparking rod and storm-proof matches among the offerings. Tools? Multitool, repair kit, duct tape, and so on. Food, water, and medical are also provided.

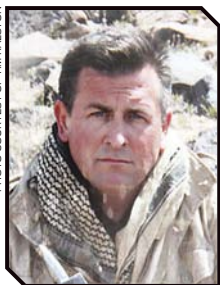
### Specifications

- Aid for eight life-saving tasks
- 40 items
- Weighs about 1 lb

**fast-fire.com**  
**\$169.95**



ASC



## PREPPING WITH RALSTON

BY TIM RALSTON

Timothy Bryan Ralston is an American inventor, veteran, adventurer, author and movie consultant for his expertise in the field of survival and preparedness education. He is best known for his appearance in the powerful motivational film, *The Compass*, and for being the international spokesperson in the launch of NatGeo's No. 1-rated program, *Doomsday Preppers*.

# Wrap It Up

☛ Nobody enters the wilderness expecting bad things to happen to them, but when they do, the supplies you packed for your trek will help determine your ultimate fate. Are you prepared with the right equipment and have you learned the right skills? Having the proper gear is one thing, but knowing how to use it is something else entirely. However, one of the best survival tools you could ever pack — which is also the easiest to use — is a good length of high-quality paracord. Despite seeming like a simple piece of small-gauge rope, it is very strong and is one tool with the most uses in the great outdoors.

Paracord is employed by survivalists all over the world. It is extremely durable for hardcore jobs yet light enough to carry with ease. It is sometimes referred to as 550 paracord because it can handle 550 pounds of weight. Another feature is that inside each cord are seven individual strands. Those strands are each composed of three fine threads, perfect for more delicate tasks. Having this variety is what makes paracord so valuable a tool in absolutely any survival scenario.

Consider this just a small sampling of the dozens of things paracord can do for you in the wild:

- Lashing together shelter
- Rigging a pulley system for hanging gear
- Traps, lures, and snares
- First aid
- Fishing line
- Dental floss
- Sewing thread

A great example of paracord at work is the SPARK Fire Starter Paracord Bracelet, which is an interesting mix of fashion and function.



### Cordage Preparedness

There are a number of survival tools that can be improvised in nature, like firestarting tools, hatchets from chipped stones, and spears from thin branches. Cordage though, at least enough to be useful, can be a little more difficult to produce in the wilderness. Unless you have the right vegetation — like dogbane, milkweed, or the inner bark of a tulip tree — along with the time and skill to craft it, it's a good idea to carry some in your provisions.



Paracord is so beneficial in an emergency that many people incorporate it into their everyday attire, knowing that by doing so, it affords them the comfort to be prepared at all times, just in case. There are a host of items which all can be created from this reliable form of cordage, and some of them are quite fashionable.

- Belt
- Keychain
- Bracelet
- Shoelaces
- Gun sling
- Dog leash
- Zipper pulls

### Wrapped in Usefulness

One of my greatest passions is to invent multi-purposed survival tools. As a survivalist myself, I know the importance of being able to free up space and weight in a pack, while providing a great working tool. After all, pounds equal pain out on the trail. **ASG**



# THE MANY USES OF PARACORD

Since its invention and use as suspension lines during World War II, paracord has been well adapted to thousands of uses, as its popularity as a well-rounded solution to any number of problems continue to grow. Dozens of companies have not only incorporated a useful length of paracord into their various products, but they have encouraged its use by offering it in a variety of lengths and a rainbow of colors. Here are just a few creative ways people have used paracord:

- ✓ Secure a tarp between trees
- ✓ Hang tools from your belt
- ✓ Secure things to the outside of your backpack
- ✓ Make a tourniquet
- ✓ Secure a splint
- ✓ Make an emergency belt to hold your pants up
- ✓ Make emergency suspenders
- ✓ Replace broken or missing shoe laces
- ✓ Repair a zipper pull
- ✓ Secure your boat or skiff to a tree
- ✓ Make a tow line; double or triple up for extra strength
- ✓ Create a makeshift lanyard
- ✓ String a clothesline
- ✓ Make traps and snares
- ✓ Replace damaged or missing draw strings in packs, bags and sweat pants
- ✓ Keep rolled up items secure
- ✓ Create a neckerchief slide



- ✓ Make a sack for carrying gear
- ✓ Make a pet leash
- ✓ Secure a garbage-bag rain poncho around your body to keep you dry
- ✓ Hang food in trees to keep the bears away
- ✓ Create a trip wire
- ✓ Use as sewing thread
- ✓ Use as fishing line
- ✓ Emergency dental floss
- ✓ Emergency suture material when there is nothing else available
- ✓ Make arts and crafts to stave off boredom




One Gun...  ...12 Calibers

**NATIONAL GEOGRAPHIC**



AS SEEN ON: **H2**

## It's Time To Lighten Up Your Load



[WWW.GEARUPCENTER.COM](http://WWW.GEARUPCENTER.COM)



## LAPD Tasers to Automatically Activate Cameras

Tasers operated by the Los Angeles Police Department will automatically activate cameras on the police officers' uniforms. The department ordered 3,000 Taser X26Ps, capable of recording the date and time as well as duration of firing and also if the Taser wires struck someone and how long the volts of electricity pulsed through the person. "This technology gives a much better picture of what happens in the field," Steve Tuttle, spokesman for Taser International Inc., told Reuters.

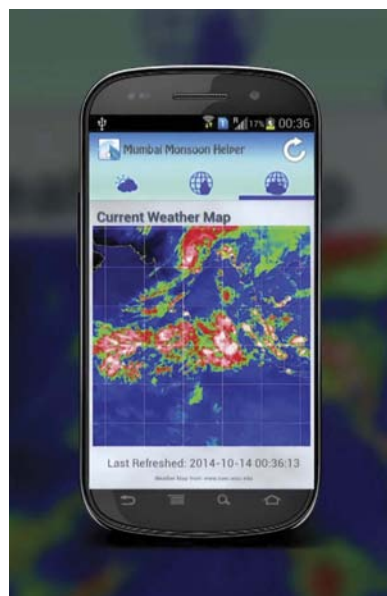


## NEW YORK TO GET ANTITERRORISM STRIKE FORCE

THE NEW YORK POLICE DEPARTMENT will be adding a Strategic Response Group to focus on counterterrorism. It'll be staffed by approximately 350 police trained in high-tech weapons. Funding is expected to come from Homeland Security and grants.

## New Monsoon App

THE MONSOON APP DOWNPOUR CHALLENGE has a grand-prize winner: the Mumbai Monsoon Helper. This app, which leans heavily on crowd-sourcing technology, allows users to sort out routes around water-logged areas, and offers real-time maps, forecasts, and more. Monsoons are a major problem in Mumbai. The Innovate Mobility Challenge Series was spearheaded by Ford and looks for unique, innovative answers to mobility problems. According to Ford, "For each competition, Ford will partner with local authorities and experts to address different issues in each location. The competitions will be judged by a panel of Ford executives involved in researching mobility solutions, as well as by local experts selected for each competition." For full details on all the challenges, visit [fordsvl.com/innovatemobility](http://fordsvl.com/innovatemobility).







## Just How Deadly are Floods?

FLOODS, ACCORDING TO THE U.S. CLIMATE RESILIENCE TOOLKIT, are responsible for about 98 deaths each year (according to research that analyzed 1957-2005). Drowning is the main cause, with flash flooding and flooding from tropical storms causing the highest number of drownings. Heavy downpours are on the rise in the U.S. and that means more waterborne diseases, too, not to mention a bump in molds and fungi.

On a related note, the Union of Concerned Scientists drafted a report called "How Sea Level Rise and Tidal Flooding Threaten U.S. East and Gulf Coast Communities Over the Next 30 Years," noting that by 2030, more than half the 52 communities it studied will have at least 24 tidal floods per year, and the mid-Atlantic coast will likely see the most flood frequency. Washington, DC, for example, could see more than 150 tidal floods per year. By 2045, there's likely to be a 1-foot rise in sea level for most coast communities.

**“We have challenges beyond technology — challenges in legislation, challenges in the controversy. We can’t afford a 404 error code.”**

— ALLIED BIOMETRIX CEO ALAN BOINUS SPEAKING AT THE SEATTLE INTERNATIONAL SMART GUN SYMPOSIUM, ACCORDING TO ARS TECHNICA. THE COMPANY IS DEVELOPING BIOMETRIC SENSORS CAPABLE OF UNLOCKING A GUN ONLY AFTER A SPECIFIC PERSON’S “REFLEXIVE ACTIONS” AND “GRIP STYLE” ARE SENSED.

## CZ SCORPION EVO 3 S1 PISTOL



**HOPEFULLY YOU’VE BEEN STOCKING UP ON AMMO.**



SHOWN WITH ADAPTER AND AFTERMARKET ARM BRACE

**FOR MORE INFORMATION VISIT CZ-USA.COM**

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COURTESY MILLENNIUM FILMS/NU IMAGE FILMS

## FCC Fines ESPN for Misuse of Emergency Warnings

THE FEDERAL COMMUNICATIONS COMMISSION believes Viacom and ESPN misused Emergency Alert System warnings. The warning tones were used in trailers aired for the 2013 movie "Olympus Has Fallen," about a terrorist attack in Washington, DC. Transmitting emergency tones violates FCC laws. The fines are \$1.4 million.



## Facebook to Post AMBER Alerts

THERE'S A NEW INITIATIVE at Facebook — a partnership with the National Center for Missing and Exploited Children will mean AMBER Alerts will be sent through newsfeeds in areas where a child has been abducted. Photos and other info about the missing child will be provided, and the alerts can be shared with friends or users can link.



## SmartWatch for Emergency Prep

COMMANDWEAR HAS RELEASED the first smartwatch that'll offer a multimedia situational awareness platform for first responders. It'll mesh smarthones, tablets, networks, apps, and pretty much anything and everything, including the ability for first responders to text — even hands-free — with command centers.



PETE SOUZA/U.S. SECRET SERVICE

## Department of Homeland Security's Budget: Billions

FOR THE 2016 FISCAL YEAR, the Department of Homeland Security (DHS) has requested \$41.2 billion in net discretionary funding. The DHS noted the money would go toward its five main missions: preventing terrorism and improving security, border management, immigration issues, protecting cyberspace, and to "strengthen national preparedness and resilience."



**Errata:** On Page 115 of the March 2015 issue, we neglected to mention that Wazoo Survival Gear is a co-owned and operated by both Dustin Hogard and Nick Blackman. For more information about Wazoo and their unique products, visit [wazoosurvivalgear.com](http://wazoosurvivalgear.com).



## Fire

From Neolithic times, man learned how to create fire by creating friction with tools, such as saws and drills and by producing sparks with stones such as flint. Whether in the desert, tropics, or polar regions, a fire will provide warmth and dry clothes, it will cook food and heat drinks, it will keep wild animals at bay and ward off insects. Sometimes it even provides a great morale booster.



► Build a stone wall around one side of your fire to concentrate the heat in a specific direction. The fire can be built in a dug hole if wind is likely to be a problem.

— ALEXANDER STILWELL,  
*THE ENCYCLOPEDIA OF SURVIVAL TECHNIQUES*

► A large ferro rod is ideal as it will perform in any environment, even after being submerged in water and is able to be used with relative ease in frigid temperatures when loss of dexterity may be an issue.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► Oftentimes the lost survivor can “go to water to find fire.” There are several species of trees with wood that is ideal and soft enough for making primitive fire that tend to grow near water, such as cottonwood, basswood, and willow.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► When selecting materials for a bow drill fire, remember the “rule of thumb.” Press your thumb nail into the selected dry piece of wood. If it leaves an indentation it is likely that the material will support combustion.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► The inner bark of many species of trees can be processed to make excellent fire tinder. Mixing in a fuel extender such as a petroleum or beeswax will allow the tinder to burn longer.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► Tossing some sage into the fire will keep you bug-free all night.

— KEITH BRADFORD, *LIFE HACKS*

► Doritos and Fritos make excellent kindling.

— KEITH BRADFORD, *LIFE HACKS*

► Birch bark and pitch wood both have a strong resin that can easily be lit, even when wet.

— GREG DAVENPORT, *SURVIVING COLD WEATHER*

► As a general rule, the lower branches on a tree — called squaw wood — are considered dead, not green, when they snap away from the trunk. Live frozen branches snap too, so if a meaty cambium layer is present under the bark, the branch is green.

— GREG DAVENPORT, *SURVIVING COLD WEATHER*

► Some tinder bundles can go up in smoke pretty fast. If your bundle is too small, your window of opportunity to get other more substantial kindling materials lit is very short. I always try to start with a tinder bundle at least the size of a softball.

— CREEK STEWART,  
*BUILD THE PERFECT BUG OUT SURVIVAL SKILLS*

► The most reliable tinder is cotton balls or dryer lint mixed with petroleum jelly. The cotton balls are flammable by themselves, but the petroleum jelly acts as a fire extender, allowing the flame to burn longer.

— CREEK STEWART,  
*BUILD THE PERFECT BUG OUT SURVIVAL SKILLS*

► A small dry bird's nest or a small rodent nest make perfect tinder bundles.

— CHRISTOPHER NYERGES, *HOW TO SURVIVE ANYWHERE*

► Wrap your disposable lighters in a dozen layers of duct tape. It will make the lighter more durable and provide you with a length of duct tape when you need it.

— ALEXANDER STILWELL,  
*THE ENCYCLOPEDIA OF SURVIVAL TECHNIQUES*

► Once sparked, sandwich your glowing tinder in between two pieces of bark to avoid burning your hands; plus the bark, if large enough, provides a great wind break.

— CREEK STEWART,  
*BUILD THE PERFECT BUG OUT SURVIVAL SKILLS*

► A great fire to build in a windy environment is a Dakota fire hole, basically a small tunnel connecting two holes, one where the fire is burning, while the tunnel to the other hole provides a steady flow of air to feed the fire. It isn't much for warmth, but is a great fire to cook with.

— CREEK STEWART,  
*BUILD THE PERFECT BUG OUT SURVIVAL SKILLS*

► You should have flares in your emergency kit. They are easy to light and last for up to 15 minutes, guaranteeing a campfire in all but the very worst conditions. It is a great signal tool as well.

— CHRISTOPHER NYERGES, *HOW TO SURVIVE ANYWHERE*

► A fire can be started by attaching jumper cables to a car battery and slowly bringing the other ends together in a pile of tinder. The spark from the cables should ignite the tinder easily.

— CHRISTOPHER NYERGES, *HOW TO SURVIVE ANYWHERE*

Stories of Survival:

# Pilot Down

CAPTAIN SCOTT O'GRADY'S SIX DAYS IN BOSNIA Story by **Bryan Dumas**



Scott O'Grady  
in his F-16

PHOTO COURTESY MARY LOU SCARDAPANE

**A**s children, we often find ourselves playing the classic game of hide and seek; hunkering in the neighbor's hedges or up some tree hoping we can elude our friends the longest. As we dare to peek from our hideout just to see how close the seeker might be a surge of adrenaline makes our muscles tense. A wave of excitement rushes over us as we watch them walk not a few feet in front of the hedge or below the tree forcing us to stifle a giggle or be found. And if we were found, the greatest consequence we'd face was becoming it.

No one ever imagines the game of hide and seek could be a matter of survival. But for Scott O'Grady, that's exactly what it became when he was shot down during the Bosnian War in 1995 as a part of the NATO forces enforcing the UN no-fly zone over Bosnia as a part of Operation Deny Flight.

The story of Scott O'Grady's six days in Bosnia is told in two books: *Return With Honor* (by Capt. Scott O'Grady with Jeff Coplon) and a young adult work *Basher Five-Two* (by Scott O'Grady with Michael French). In them O'Grady starts out in a briefing where he and his flight lead — Captain Bob



"Wilbur" Wright — review the SAR (search-and-rescue) plans should anything go wrong on their sortie over Bosnia. In *Return With Honor*, O'Grady remarks of the discussion that, "While I'd glanced at our written SAR material some weeks before, it wasn't something I'd spent much time studying. In the real world, pilots can't map out escape and evasion ploys in advance. There are too many variables outside your control, from terrain and injuries to the proximity of hostile forces." Ultimately, O'Grady's SAR was improvise, react to circumstance, and rely on common sense. Survival scenarios were not a top priority that day, not out of nonchalance, but no one ever expects to become a victim. For O'Grady, he had a job to do: To patrol the air space over Bosnia and prevent *any* of the combatants in the war from utilizing the air to gain a military advantage.

Three hours after the briefing, suiting up, and prepping the aircraft, O'Grady and Wright were on their way from Aviano Air Base in Italy toward the Bosnian coast. Their patrol would take them on a 25 mile long race-track-like oval over Bosnia where they'd watch for any aircraft attempting to violate the UN no-fly rules. Their first circuit over Bosnia and refueling high above the pristine Adriatic was an uneventful run, but little did they know that below them, Bosnian Serb forces had secretly moved an SA-6 battery south.

As O'Grady and Wright set up for a second CAP (combat air patrol), Wright's threat warning system warned he was "spiked" or that an enemy radar system was watching him from the ground. Though it didn't mean they were actually firing missiles, O'Grady says, "they sure might be thinking about it." It was quickly determined to be a false alarm, but it got both pilots' attention.

At 3:03 p.m. in the afternoon of June 2, shortly after the first spike, O'Grady's radar warning system began to chirp. He was spiked. "You might say I felt uneasy. I didn't like being stared at — especially when the staring might preface a ballistic payload, aimed straight at my gut."

Seven seconds after the spike: O'Grady was pushing his F-16 to its flight limits in an effort to evade and survive. "My first thought was angry and simple: *We've been set up*. They laid a trap for us, and all of our detection systems had missed it. I was swimming straight into the jaws of a shark."



Scott O'Grady's area of operation was a 25 mile circuit near a city approximately 50 miles northwest of Sarajevo.

**"MY FIRST THOUGHT WAS ANGRY AND SIMPLE: *WE'VE BEEN SET UP*. THEY LAID A TRAP FOR US, AND ALL OF OUR DETECTION SYSTEMS HAD MISSED IT. I WAS SWIMMING STRAIGHT INTO THE JAWS OF A SHARK."**



Scott O'Grady aboard the USS Kearsarge immediately after rescue



[ABOVE] Scott O'Grady (center) with T.O. Hansford (Basher One-One, left) and Bob "Wilbur" Wright (right) at a press conference after O'Grady's rescue.

**"HE REMEMBERED  
WHAT HIS SURVIVAL  
INSTRUCTOR HAD  
TOLD HIM ABOUT  
EVASION: "JUST  
DON'T MOVE. DON'T  
ASSUME THEY SEE  
YOU JUST BECAUSE  
YOU SEE THEM."**

Eight seconds after the spike: a programmed female voice in O'Grady's headset called out, "Counter, Counter." He went to deploy the chaff flare system.

Nine seconds after the spike: A searing red flash of a missile exploding between Wright's and O'Grady's jets lit up their cockpits.

Ten seconds after the spike: They weren't safe. SA-6s come in sets of three. There were two more missiles streaking toward them at supersonic speeds. Wilbur yelled: "*Missiles in the air!*" but O'Grady never heard it. "Within a second after that red flash, all I could hear was the murderous *bang* that swallowed me whole, like the whale that got Jonah.... When a plane and a missile collide, the plane finishes second."

In the next fraction of a second, strapped into an F-16 that was now severed in two and quickly becoming a flaming torch engulfing him in blistering heat while disintegrating around him, O'Grady took a moment to say a quick prayer asking God to save his life and then reached down between his legs and pulled on the yellow handle of the ejection seat.

Hanging beneath a candy-colored, 28 foot canopy and "as conspicuous as the Goodyear blimp" he took inventory: hanging at the bottom of a 25 foot nylon cord was his vinyl rucksack that contained most of his survival gear; half-way up the line was a partially inflated raft. Closest to him, near his seat kit, was an auxiliary hit-and-run kit. He checked his body and found that the burns he suffered in the initial strike had eased into a chronic but

bearable smarting. Then he scanned beneath him for a suitable landing place. What he found was that he was drifting over a highway with a truck that resembled a "military truck with a canvas top in back, the type seen on *Hogan's Heroes*. The type they crammed with soldiers." The truck, and another car, had stopped along the shoulder and O'Grady couldn't help but wonder if he was a mere curiosity, a target, or a hostage-to-be as he dangled beneath his parachute.

Once on the ground, with the truck and car not more than a mile up the highway, O'Grady rushed to release himself from the parachute gear and gathered his survival equipment which was now tangled in the chute lines. Seconds were ticking away. Seconds the men who were on their way to find him were using to close in. Seconds he couldn't afford to waste untangling the nylon cord holding his rucksack. "Maybe that's why I made my mistake — or maybe I just had too much to deal with in a flash of time. The fact remains that I left behind my hit-and-run auxiliary survival kit within its canvas shell, with my backup radio and half my ration of water inside. I simply forgot it in my haste to get away."

Having left his parachute behind, O'Grady sprinted into the woods with his rucksack tucked beneath his arm as though he was playing running back for Notre Dame. Counting on adrenaline, he hoped his "fight-or-flight juice would carry me forever, but after 30 seconds I was sucking air." The entire weight of the afternoon's events came crashing down on his body and he couldn't go any further.

Knowing he'd have visitors sooner than later, O'Grady dove into a stand of aspen-like trees and burrowed himself behind a small tree root. Nearby, he could hear vehicles and voices near the spot he left his parachute, the last of the vehicles grinding to a distinct truck-like stop. With one last moment alone, he tried to reach Wright somewhere above him, not knowing if Wright had even seen his chute deploy. He got out two quick transmissions before "the grass rustled with footsteps, coming my way. Coming with the careless noise of men who know their prey is cornered."

Within moments two men — one white haired and the other younger, possibly a grandson — approached not five feet from where O'Grady lay, curled into a fetal position, his green synthetic flight gloves covering





A U.S. Navy Sea Knight helicopter, the kind similar to those that rescued O'Grady, lifts off from the flight deck of the amphibious assault ship *USS Kearsarge* (LHD 3)

his face and ears. He held his breath and prayed that he could disappear into the black Bosnian soil. He remembered what his survival instructor had told him about evasion: "Just don't move. Don't assume they see you just because you see them." Hide and seek on a life or death scale. But the men kept walking without a hiccup in stride or conversation.

But this victory, a blessing from God as O'Grady puts it, was short lived. Now, groups of two and three men were scouring the underbrush. Over the next hour, O'Grady watched as 15 or so of them, this time armed with rifles, dressed in civilian clothes, wandered around his hole-up.

For the next six hours, he spent his time in prayer and frozen still by random gunfire in the distance. He thought about his parents, about his brother and sister, and about his own funeral. But he knew he couldn't dwell on these things. The reality was he was there, it was all too real, and his "next mistake might be [his] last."

Though there were risks in leaving his hole-up, around midnight O'Grady decided being close to the highway was worse than moving. He took inventory of the things he had: The torn bags holding his survival gear could be discarded (useless and noisy), his harness with its metal clips could go (too visible and noisy). The rest he'd carry. It was not time to sort out the remainder of the survival gear.

The next challenge: Getting up off the ground. "Anyone blessed with a healthy body does this every day, without thinking, but it's a whole different enterprise when you must do it without sound." After what felt like an eternity of move, pause, listen, repeat, O'Grady grabbed his rucksack and began the slow crawl away from his hideout. It took him a solid hour to get out of that place.

Moving only at night, O'Grady utilized the *BLISS* principle he'd been taught to secure a place to hide through the day: "a hole-up should Blend into its surroundings; be Low and regular In Shape; set in a Secluded area. My wish list also included a decent angle for observation, an avenue for escape, a good spot for radio reception, and protection from the elements." After another visit from the old man and the grandson at his second hole-up, O'Grady decided he was still too close to the road. He moved deeper into the forest and found the second of five hole-ups. However, each morning he realized the dark night had played tricks on his eyes; the hole-ups he created weren't as hidden as he'd thought, and he had to make early morning adjustments or move a quick second time. Two of the days, while lying in



Scott O'Grady with President Clinton



The amphibious assault ship the *USS Kearsarge* (LHD 3) during exercises in the northern Red Sea on Aug. 24, 2005.

## “IF HELP DIDN’T COME? I WAS GOING TO *SURVIVE*.”

his hole-up, he was visited by a herd of cows — two in particular he named Leroy and Alfred — and their tender who insisted on ringing a bell constantly and earned the nickname Tinkerbell.

With food in little supply, O’Grady ended up dining on red ants, grass and leaves that he tested as safe by eating one, waiting an hour to see what it might do, and then eating a few more. With no ill-effects, he plucked the cleanest ones he could find and ate them. By the fourth night, his meager water supply was exhausted. O’Grady followed the SERE rule: “Ration sweat, not water” and made sure the best place to store water was in his stomach. As an answer to his prayers, something he believes brought him through those six nights, the skies opened up and poured. Using a small yellow sponge, he wiped his rucksack and any other place where water, no matter how small a pool, gathered. And every time he had a chance, he would briefly check in on the two emergency frequencies to see if anyone was out there looking for him.



Captain Scott O’Grady (USAF-retired) today.

After six long, tiring, and frightening nights behind enemy lines in Bosnia, and after one missed opportunity at making contact with a search plane, O’Grady’s ritual of beacon, pray, monitor, sit, wait — what he calls the “Bosnian cha-cha” — finally transmitted three distinct clicks on his radio. At 2:06 a.m. he heard: “Basher Five-Two (his call sign), this is Basher One-One on Alpha.” Salvation was close at hand. Five hours later, men from the 24th Marine Expeditionary Unit (TRAP force), aboard their CH-53Es covered by two Marine AH-1W Super Cobras, landed and extracted an exhausted, but grateful, Scott O’Grady from Bosnia.

It wasn’t until he was aboard the *USS Kearsarge* in the medical ward O’Grady admits he finally stopped trying to survive. In an interview days later, a reporter asked, “Did you have a contingency plan if you weren’t picked up? What were you going to do if help didn’t come?” O’Grady’s response was simple and perfect: “If help didn’t come? I was going to *survive*.” **ASB**



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[www.KilimanjaroGear.com](http://www.KilimanjaroGear.com)



# Quick Pack

## HOW TO CONVERT A PAIR OF PANTS TO A PACK IN A PINCH

Story and Photography by **Christopher Nyerges**



Once filled, it will provide a great carry-all for whatever gear needs to go with you.

**W**hat happens if you forget your equipment or you find yourself in a situation where you have been separated from your pack and you've still got gear to carry? You'll have to get creative and find a makeshift solution by converting a few common items into a pack. For this, you can use a pair of pants, a sweatshirt, or even a button-up shirt and turn it into a day pack. It's really simple, and all you'll need is some rope or cordage. Let's use a pair of pants as our example.

### GETTING STARTED

With a bit of twine, tie off the end of each pant leg. You should tie it tight. Pull up the zipper and button the top.

Now fill the pants with whatever you need to carry. Fill the legs with soft material first, since the legs will become your pack straps. Next, fill up the upper part of the pants with whatever it is you need to carry. Try to balance the weight, and don't have any sharp object jutting into the back, just like you do with a normal backpack or day pack.

Next, put a length of twine through the belt loops and cinch it up, and tie it well. Then bring each pant leg up to the waist, and secure the bottom of each pant leg to the waist.

Go ahead and see how it fits. If the pack straps are too tight, you need to let out a bit of the cord on the pant legs and re-tie the pant legs to the waist.

From this explanation, you can see how easy it would be to turn a sweat shirt into a pack. With the sweatshirt, it's all the same except you begin by taking a bit of cord and tying off the neck. You need to do this very securely, otherwise you will lose things on the trail.





An emergency pack like this can be a savior in a time of need. Although there have been many variations of this idea presented over the years, one of the first times it ever appeared in print was in Ellsworth Jaeger's 1945 book, *Wildwood Wisdom*.

## PRACTICAL EXPERIENCE

There was one time when I actually needed a pack, and the only extra clothing item was my long sleeved shirt. I took off my shirt and buttoned up the front. I stripped some fiber from some yucca leaves, and tied off the neck. Next, I tied off each cuff. Since I was using this "pack" to collect acorns and pine cones, I first filled the arms with acorns, which I put into a few paper bags to keep them contained. Then I filled the remainder of the shirt with pine cones. I tied off the cuffs, and tied the cuffs to the waist of the shirt, securing it all together. It fit well, but was a bit uncomfortable because of the pine cones. Still, I got home okay and didn't lose any acorns or pine cones. Since it was already dark by the time I'd hiked home, I was a bit cold wearing only my t-shirt, but not too uncomfortable. **ASG**

**About the Author:** Christopher Nyerges is the author of *How to Survive Anywhere* and other books. He has led wilderness and wild food classes since 1974 and was one of *American Survival Guide's* original contributors. He can be reached at [SchoolofSelf-Reliance.com](http://SchoolofSelf-Reliance.com)

1. Any regular pair of pants will do, but if you have a choice, go with the biggest pair you can find (larger pants will carry more, of course).
2. Start by tying up the legs. If you lack rope, string, or twine, you could use zip-ties, shoe laces or even rip strips of cloth from the pants themselves.
3. Thread some twine through the belt loops of the pants and tie the ends together tightly.
4. Draw up the legs to the waist and tie them off securely. These ties will bear the brunt of the weight of the load.
5. Then tighten down the twine around the waist so it is tight.

## What to Carry in Your Pack

Though the items you can carry in your pack will be mostly dictated by the situation you are in (remember, you're wearing your pants as a backpack, so there has been an emergency of some sort), but mostly consider the essentials: food, water, shelter, ability to make fire and find your direction. Gathered berries and larger fruit are a lot easier to transport in greater number with a pants pack, giving you the ability to move more freely and unencumbered by the load. As well, an armful of loose gear is unwieldy, keeping you from traveling quickly and potentially causing some of the gear to be inadvertently lost along the way.





# 138 Tips & Tricks from Survival Experts

## Ropes & Knots



Anyone who spent any amount of time in the wilderness understands how important ropes and knots are to the basic functions of survival. For example, they are needed to secure equipment or to lash together logs to create a raft using rope, cordage, paracord and natural fibers.



▶ Never tie a knot you cannot untie.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ A knot is the weakest part of the rope when it is tied, and it will make the rope even weaker if it is not tied properly.

— ALEXANDER STILWELL,  
THE ENCYCLOPEDIA OF SURVIVAL TECHNIQUES

▶ Learn jam knots to conserve your cordage supply. Learn joining knots so if you ever needed to cut your ropes or cordage you can quickly splice them together. Also, learn to add a safety or stopper knots to your knots and lashings for added security.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ When you need to utilize tree barks as cordage, try to collect them in the spring when the "sap is up." If you are not lucky enough to be in the right season, you can soak old dead falls and branches in water overnight. This process separates the wood and bark layers. Natural cordage is easier to make when slightly wet, and it shrinks and tightens up when dried.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ The fibrous leaves of the yucca plant make excellent natural cordage with which to weave rope or small baskets.

— CREEK STEWART,  
BUILD THE PERFECT BUG OUT SURVIVAL SKILLS

▶ Rootlets, small roots especially from pine and spruce trees, can make excellent cordage. They are flexible and very tough.

— CREEK STEWART,  
BUILD THE PERFECT BUG OUT SURVIVAL SKILLS

▶ The cedar tree is known for having very fibrous inner bark. To access it, make a cut through the outer bark and the white inner bark and then peel upward. Both layers will peel in long strips and the inner bark can be separated.

— CREEK STEWART,  
BUILD THE PERFECT BUG OUT SURVIVAL SKILLS

▶ My favorite cordage plants are milkweed, dogbane, and stinging nettle. I've also harvested descent cordage from cattail, horseweed, burdock, and many grasses.

— CREEK STEWART,  
BUILD THE PERFECT BUG OUT SURVIVAL SKILLS

▶ If you were to learn only one knot, make it the bowline. This knot and its variants are some of the most widely used loop knots, largely because they are relatively simple to tie and have a high level of security.

— ALEXANDER STILWELL,  
THE ENCYCLOPEDIA OF SURVIVAL TECHNIQUES







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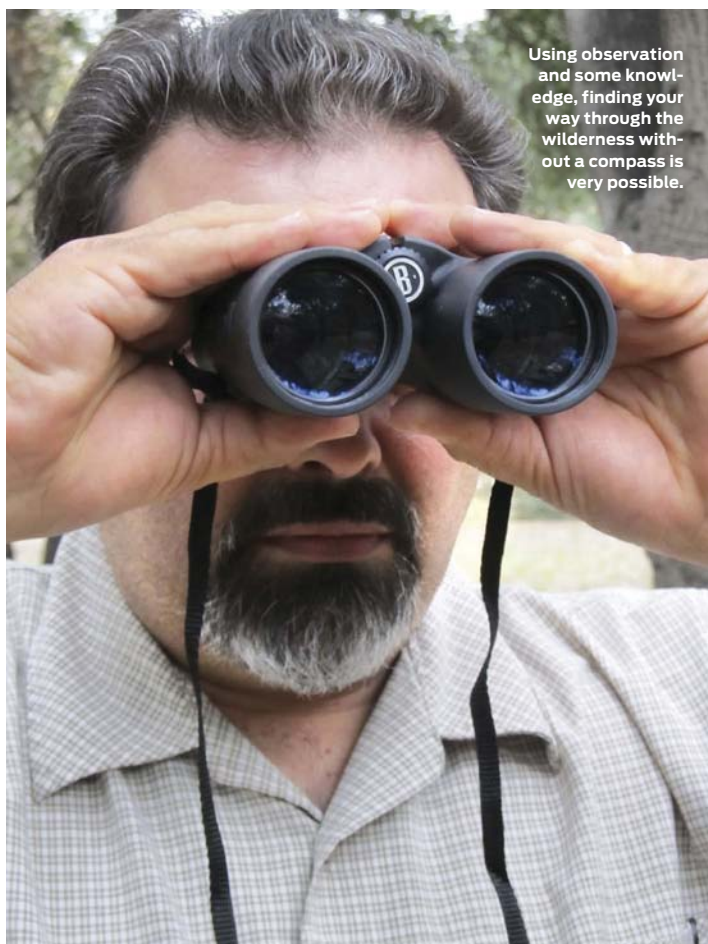




# Motherly Advice

NAVIGATE THOUGH MOTHER NATURE'S BACKYARD WITH HER HELP

Story and Photography by **Christopher Nyerges**



Using observation and some knowledge, finding your way through the wilderness without a compass is very possible.



**S**tepping off the trail and heading up a canyon for a mile or so is enough to get a person lost. The twists and turns of a benign-looking range of hills and arroyos can be confusing, especially if you add to it the fears of survival, pangs of hunger, or the parched dryness of thirst. You know where you came from — a broken-down car or last night's camp — and you know where you want to go: to civilization. But you're not sure how to get there. You need to get from Point A to Point Z and you're on foot. You've never done that before, so you'll have some challenges. To help overcome some of those challenges, you're prepared, because you have in your bug-out bag a map of the area and a compass, right? Right? If not, put down this magazine and go add these two essential items to your pack.





There are a wide variety of compasses, from inexpensive “button” ones to very expensive models.

## MAP AND COMPASS

A map of your terrain is always more important than the compass, though you should always consider them as a unit. You can use them independent of each other, but a map alone can be complemented by nature’s compass. If you only have a compass, you can accurately travel in a straight line for miles through fog, or forest, and then go back the same way you came.

A map is an aerial picture of your terrain, showing you the location of roads, buildings, water, towns, railroad lines, mines – everything you need to know. The USGS topographical map is the map of choice because it gives you a visual depiction of the rise and fall of the land. This enables you to choose the easiest route

(which is not necessarily the shortest) between two points.

A compass certainly makes the map more useful, since it enables you to accurately align the map with the actual terrain, so you can head in the appropriate direction. There are other ways to align the map with the terrain if you don’t have a compass, such as physical observation of the terrain, and sighting of the North Star.

When you buy a compass, read all of the instructions that come with it and practice all the exercises the manufacturer provides. One of the best ways to learn to use a map with a compass is to enroll in a local college class on orienteering or participate in a few programs with a local club.





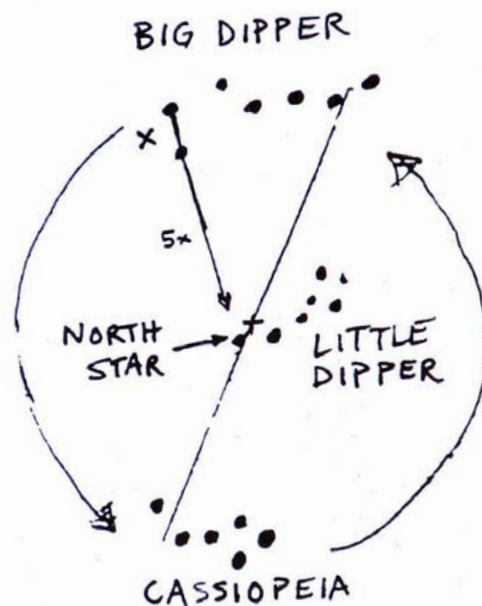
Learn to properly orientate a compass to a map (see "Never Get Lost" in Volume 3, Issue 6, Page 36).

But life isn't always convenient. Maps and compasses get lost, forgotten, broken, ripped, burned. What then? Let's look at some of the ways we can determine directions if you have neither a map nor a compass.

## 1 THE STARS

The North Star is not the brightest star in the sky. If you follow it with time lapse photography, the North Star will appear to be stationary, and all the stars would appear to rotate counter-clockwise around it. If you were standing on the north pole, the North Star would be directly overhead. To find the North Star, locate the Big Dipper. The North Star is in a direct line with the two end stars of the Big Dipper.

Go outside on a moonless night and get to know the constellations. Begin with the Big Dipper and Cassiopeia. Get to know Orion. Once, while driving in an unfamiliar part of Los Angeles with a friend, we got hopelessly lost. I was able to stick my head out the window, see the Big Dipper, and determine which direction we should drive to get to our destination. It worked!



Find your direction using just a couple of the millions of stars in the night sky.

## 2 WATCH YOUR SHADOW

There is a simple method to generally tell directions (and time) with a stick and some pebbles. Place a stick into the ground. Put a pebble at the end of the shadow. Wait 20 minutes or so. The shadow will move, so put another pebble at the end of the shadow. Wait another 20 minutes and do this again.

In general, when you are in the northern hemisphere, your shadow will be pointing north if the stick is stuck vertically into the ground. (In fact, this is not always so, such as during mid-summer when the sun is north of the celestial equator ... but, read on).

The shadow's movement, marked by the pebbles, will be eastward, because the sun moves west-ward. The shadow should be the shortest around noon, when the sun is directly overhead (directly overhead at 1 p.m. if it is Daylight Savings).

If you draw a straight line from the stick to the stone marking the shortest shadow, you should have a north-south line, more or less. A perpendicular line gives you an east-west line, becoming a crude compass. If you know the approximate time the sun is rising and setting, you can evenly divide the arc formed by the stones and create a crude but usable sun dial clock.



## FINDING AN EAST-WEST LINE



1. Place a stick in the ground and place a pebble at the end of the shadow.



2. As the shadow moves, place another pebble at the end of the shadow.



3. Continue to do this as long as possible — it works most accurately around noon.



4. When you have several pebbles, you can draw a line through them, or place a stick there, so you have created a more-or-less east-west line.

### 3 NATURAL DIRECTIONS

You have no map, no compass, and you're lost or confused. Are there signs in nature to tell you directions? We have long heard moss grows on the north side of trees. Yes, it does, but it also grows on the east side, the south side, and the west side of trees, especially in a dense forest where there is little light. Though there is logic to this idea, and though in a clearing the moss is predominantly on the northern half of the tree (there's less light there), it is not a precise, nor reliable, method of direction-finding.

All rivers flow to civilization. Really? This myth has been repeated over and over that it seems to be a fact in the minds of many. And since it *sometimes* does work, its efficacy seems enforced. But it simply isn't always so. Just look at a map. The only direction rivers and streams consistently flow is downhill. If you are

lost, following a stream downstream might lead you into very rugged wilderness. This is not a sure-fire way to get "un-lost."

In fact, there is no single natural observation that will tell you directions. You need to be observant of many features, and collectively — in conjunction with your common sense and "thinking on your feet" — you stand a good chance of determining compass points. Here are a few of those general guidelines — though some would put these observations into the category of "folklore." This is because they are "general" guidelines. Rely on these alone and you may still remain hopelessly lost.

### 4 TREES

Tips of certain trees will tend to point in specific directions. For example, the tops of willows, poplars, and alders often point south because they grow typically in canyons or

"WE HAVE LONG  
HEARD MOSS  
GROWS ON THE  
NORTH SIDE OF  
TREES. YES, IT DOES,  
BUT IT ALSO GROWS  
ON THE EAST SIDE,  
THE SOUTH SIDE,  
AND THE WEST  
SIDE OF TREES,  
ESPECIALLY IN A  
DENSE FOREST  
WHERE THERE IS  
LITTLE LIGHT."



Do tips of trees always point in a certain direction? Sometimes yes, sometimes no.

## How Much Daylight is Left?

This is an old way to tell approximately how long it will be until the sun sets. Face the horizon and extend your arm. Tuck in your thumb. Bend your hand so your fingers are parallel to the horizon. Now, using your four fingers, measure up from the horizon to the sun. Each finger represents about 15 minutes of the sun's travel across the sky.

This will give you a good idea when the sun will hit the horizon. Keep in mind in the summer, there will still be usable light for at least an hour after sundown. In the winter, things will get pretty dark after the sun dips below the horizon.

If you need to make camp before dark, this is a good way to determine how much light is left.



Sometimes, the tips of certain trees will face a specific direction. For example, the tips of pine trees usually face east.

streams, which are (more often than not), flowing southward. But a stream can have lots of bends and curves and so this is only a very general observation that can help, in conjunction with other observations.

The tips of pines and hemlocks often point east. These trees are typically found at higher elevations and the tips are affected by prevailing winds. The operative word here is "often," not "always."

## 5 BIRDS

It is said the holes of woodpeckers are always on the east sides of the trees. This is demonstrably false. However, in general, the pileated woodpeckers tend to peck primarily on the east sides of trees. This is a bit too imprecise to be of any practical value; plus, how many of us can differentiate between the pileated woodpecker and any other woodpecker's holes?



Do woodpeckers and sapsuckers always make their holes on the same side of trees? Usually not.

## 6 FACING THE SUN

Flowers often face the sun. This is how sunflowers got the name. You can point a time-lapse camera at a sunflower and watch it move throughout the day to face the sun as it moves across the sky.

Any hill or mountain range which runs in an east-west direction will receive the most vegetation on the north side. The south side — exposed more to the sun, will have different plant communities and generally be drier. The north side will retain snow longer, and will have more shade, and thus more ferns, moss, etc. This means if you had to travel and be quiet, it would be best to walk on the northern side of the hill where there is more moisture. On the south side, there would be drier soil and dry twigs that would make more noise as you walked through. **ASB**

**About the Author:** Christopher Nyerges has been teaching outdoor skills since 1974, and is the cofounder of the School of Self-Reliance. He is the author of *How to Survive Anywhere*, *Self-Sufficient Home*, and other books, and he has been contributing to *American Survival Guide* magazine since the early 1990s



## Food and Water

**Above all else, food and water surpass any and all needs in a survival situation lasting longer than three or four days. Your body cannot live without water, especially in a hot desert or an arid arctic environment. Place a great deal of importance on finding water first. If you locate a water source food will likely be close.**



► If you need to eat, focus on small game. Small game is more prevalent than large game in a woodland and urban situation. You can process and cook smaller amounts of food sources faster and there is no need to carry the extra weight of leftovers or waste.

— JAMIE L BURLEIGH, ONEFOOTINTOTHEWILD.COM

► When one packs a survival kit make sure to either pack enough water or supplies that will get you through comfortably for at least 72 hours. Law enforcement and search and rescue teams will not even start looking for someone until then.

— JAMIE L BURLEIGH, ONEFOOTINTOTHEWILD.COM

► When choosing a wilderness water bottle, choose stainless. A stainless steel water bottle will be an effective and reliable container to boil otherwise unclean water, making it safe to drink.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► In a survival scenario, you must measure the risk versus the reward of every task. This becomes especially true with calories. Don't expend calories and time going on a long distance hunt that may prove unsuccessful knowing you have plenty of easy to obtain food sources close to camp.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► When using water filters in freezing temperatures it is crucial the filtering element itself does not freeze as this could render the filter ineffective. Store your filter in an inside coat pocket where your body heat will prevent it from freezing.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► Live food never spoils. When possible keep game animals alive by using live traps and placing fish on a makeshift stringer. This is especially important in warmer seasons.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

### EDIBLE BUGS VS. GROUND BEEF AND COD FISH —GREG DAVENPORT, SURVIVING COLD WEATHER

	Protein (g)	fats (g)	carbs (g)	calcium (mg)	iron (mg)
Crickets	12.9	5.5	5.1	75.8	9.5
Grasshoppers	20.6	6.1	3.9	35.2	5.0
Water beetles	19.8	8.3	2.1	43.5	13.6
Red ants	13.9	3.5	2.9	47.8	5.7
Silkworm Pupae	9.6	5.6	2.3	41.7	1.8
Termites	14.2	n/a	n/a	0.05	35.5
Weevils	6.7	n/a	n/a	0.186	13.1
Ground Beef	24.0	18.3	0	9.0	2.09
Broiled Cod	22.95	0.86	0	0.031	1.0

► When you're thirsty and limited water is available, rinse your mouth for 30 seconds before swallowing. Most of your "thirst" comes from a dry mouth.

— CLIVE JOHNSON,

SURVIVAL TIPS: 150 WAYS TO SURVIVE EMERGENCY SITUATIONS

► Make rainwater drinkable by adding eight drops of bleach per gallon.

— KEITH BRADFORD, LIFE HACKS

► Rice with beans is the ultimate survival food. Beans are loaded with antioxidants, fiber, and minerals. When combined with rice, beans provide an excellent high-quality protein source.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

► Drizzle a few teaspoons of olive, corn, canola, or vegetable oil on your survival meals as a calorie booster. These oils provide about 40 to 50 calories per teaspoon.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

► Coconut water naturally contains essential electrolytes and more potassium than a banana. It's a natural way to stay hydrated and replenish lost electrolytes.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

► Birds that feed on grain, such as pigeons and finches, frequently fly toward water at dawn and dusk in a direct, low flight path.

— GREG DAVENPORT, SURVIVING COLD WEATHER

► Water doesn't need to be boiled to be safe. Merely heating the water to 150 degrees F for 20 minutes pasteurizes the water, making it safe to drink. Pasteurization kills all human disease pathogens.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

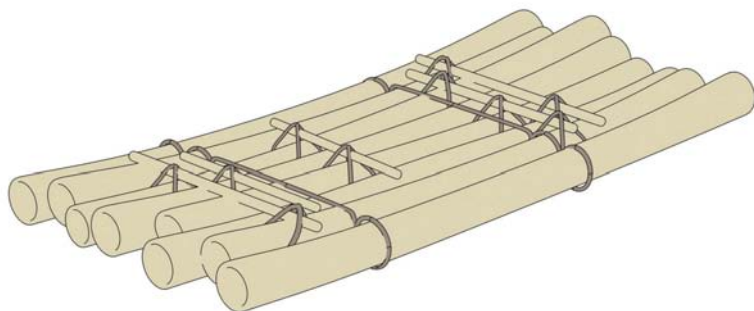
► Make a transpiration still by covering a large bunch of leafy branches of a tree with a clear plastic trash bag. Place a small stone so there is a space at the bottom of the bag. Seal the bag tightly and it will average one to two cups of water in a day.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

► Remember that in the desert, water may be underground. Find a dry lake or riverbed at its lowest point and dig. If you start finding wet sand, stop digging and allow the water to seep in.

— CLIVE JOHNSON,

SURVIVAL TIPS: 150 WAYS TO SURVIVE EMERGENCY SITUATIONS



# Emergency Boatbuilding

## 101

### IMPROVISED BOATS YOU CAN ROW TO SAFETY

Story by **Captain Bryce Potter**

**A** basket boat is one of the oldest and simplest boatbuilding methods known to man. They are used all over the world, and range in form from a simple round boat that will support a single person for fishing on ponds, to long, narrow shapes that have crossed oceans.

Boats that can be built in the field are still regularly used in many different forms around the world. On lake Titicaca at 12,000 feet in the Andes, boats are still made by tying large bundles of reeds together to make seaworthy craft. Indeed, if you have an adequate amount of reeds or bamboo this can be one of the simplest boats to construct that does not need a skin.

Perhaps the simplest form of improvised boat is the simple log raft, built by lashing several logs together, although even two logs can provide enough stability to paddle effectively if the water is warm enough, or if the logs are large enough. In Jamaica, simple bamboo ferries are constructed out of giant bamboo. They are durable enough that with no maintenance, they last about six months. How long does it

take to grow the bamboo to replace the boat? About six months. You can build boats forever, if you like.

In modern materials, fish totes are used for races in Alaskan waters, and as a substitute for traditional basket boats in Vietnam. And how about the fishermen who used boats made out of junked refrigerators in the aftermath of a hurricane? If you happen to be marooned in an abandoned or heavily damaged industrial area there are all sorts of useful items lying around, but make sure that, for example, the drums that you're building your raft out of didn't contain hazardous waste at some point. The residues can linger for a long time, and can injure you directly as well as contaminating the fish you are eating.

An improvised boat can be many things, but the prime considerations are strength and stability – the boat needs to be as safe as possible. An outrigger or two added to any vessel will make it much more stable if you have the means to build one. This is common practice in large parts of the world where small, hand-made boats are still used to make a daily living.

PHOTO COURTESY OF LIBRARY OF CONGRESS





Union General Herman Haupt  
paddling a small raft in 1863,  
during the American Civil War.  
Military troops have been  
improvising boats for as long  
as warfare has existed.

# Building An Emergency Boat in 10 Steps

## Materials Needed:

- ✓ Tarp
- ✓ Paracord
- ✓ Sticks

**1.** Select a smooth area of ground well above the high tide line but with easy access to the beach.

**2.** Collect about 30 stakes, two feet long. Pound the stakes into the ground in a double row, about six inches apart, in the shape you want your boat to take. Will it be a simple round basket boat, the easiest and most material-efficient type of boat? Or will it be more of a kayak shape, to paddle easier and be more seaworthy?

**3.** Begin gathering small, supple sticks or reeds. If you happen to have bamboo nearby that's even better! You stack the sticks between the stakes you set up earlier, making the stack about six inches high. Once the whole shape of the boat has been outlined with a six-inch thick stack of sticks, you take your parachute cord and begin tying the stack together into a bundle, so that it is one solid but flexible piece. Now you have a boat-shaped bundle of sticks.

**4.** Put in ribs, sticking them through the bundle at an angle and bending them down so they make an arc across to the opposite part of the bundle.

**5.** Once the ribs are in, you weave stringers through them, forming a loose weave. This doesn't need to be too tight, as it is just there to give the boat structure. If you had to, you could make it a very tight weave and cover it with pitch to waterproof it, but that approach would take a considerable amount of time. The boat is now about as watertight as a colander.

**6.** Pull a tarp out and wrap it around the outside of the frame you have built, wrapping the tarp tightly over the top of the bundled sticks and tying it down to the inside of the frame. Double check everything carefully, and float test it.

**7.** Find some straight sticks about as long as you are tall, and just thick enough to fit comfortably in your hand at the narrow end.



A

Carve a handle in the skinny end, and carve away the thick end to form two flat surfaces. You now have a paddle. Make spares, you won't get a second chance so you want to make sure it succeeds.

**8.** Watch the weather carefully. You don't want to risk your carefully constructed vessel in anything but the most benign conditions. A failure more than a few hundred yards from shore would likely kill you, so make certain you have done all you can.

**9.** Your might be able to string jackets together between the two spare paddles, and the handheld improvised sail could draw you downwind toward your destination on an opposing shore.

**10.** You could disassemble the boat, coil up the parachute cord, fold the tarp, and scatter the sticks and paddles back into the water. As you walk up the beach to all appearances it would look as though you simply walked out of the sea.

**About the Author:** Captain Bryce Potter has been a professional mariner for 13 years. He is a graduate of Maine Maritime Academy's Small Vessel Operations program, holds a 1600 Ton Ocean Master's license for motor and sail vessels and has worked aboard sail training ships all over the world as well as tugboats in Alaska. He lives in the Pacific Northwest.







**B**

**A.** This tightly woven basket boat could simply be coated in pitch and used without the need for a covering. An even simpler solution would be to learn the methods of weaving watertight baskets that have been practiced by many indigenous communities around the world, and apply that to boat-building. **B.** This Bolivian reed boat is an example of what can be done if you don't have a tarp or other means of covering a boat. The boat is entirely constructed of four bundles of reeds: Two large bundles for the lower hull and two smaller bundles for the hull sides. **C.** Bamboo rafts such as these are commonly used as small ferries or water taxis in many places around the world, and will serve your efforts equally well. Often in shallow water, as seen here, it is more efficient to pole the raft, pushing off of the bottom with a long pole rather than paddling. These poles make progress against a current possible, which can be difficult to accomplish with a paddle. **D.** This gigantic basket boat could easily transport half a dozen people as well as a large pile of supplies. The interior illustrates well the basket-like methods of construction. **E.** Improvising means of making the best use of whatever material is available. These large plastic tubs were available to these Vietnamese boatmen and they quickly adapted them to fit what they needed. The motorcycle tires around the rim of the tub serves as a fender to prevent damage when coming alongside larger boats.



**C**



**D**

SPIERAJ'S PHOTO



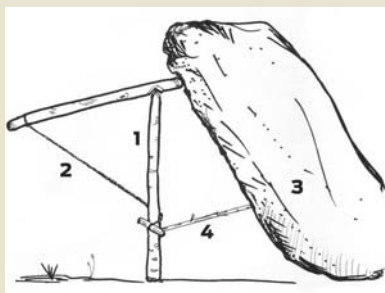
**E**



# 138 Tips & Tricks from Survival Experts

## Traps & Snares

The easiest and quickest way to provide a meal for yourself is via traps and snares. Animals are habitual and will follow the same trails to and from their food source. Take notice of those trails and observe the animal patterns. Set your traps or snares accordingly.



▶ The scent of the actual animal's scat or urine is the best lure for the same species.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ Choose wisely when making a meat gathering/trapping kit for your long-term survival kit. Snares and snare wire are a one-time use item in almost all cases.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ Trapping is a numbers game. The more you set the better your success. I can carry 2000 fish hooks in the same area and weight that a single rat trap would take up in my kit.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ Hot air rises during the day and cold air sweeps down the valleys at night. Therefore, smells drift uphill in the daytime and downhill at night. Stay upwind of potential meals.

— BOB CARSS, THE SAS GUIDE TO TRACKING

▶ Clothing can be smell-neutralized by hanging it up on a clothes line to weather for a few days. I would not recommend burying your equipment or hanging it over a fire, as this will only make you smell like a ploughed field or a burned out fire and the quarry will be alerted.

— BOB CARSS, THE SAS GUIDE TO TRACKING

▶ In creeks and small streams, use saplings to create a fish trap and funnel. The opening should be on the upstream side so the current will aid in the funneling process. To herd fish into your trap, start upstream and wade toward your corral.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ To make a loop snare for small mammals, use a slipknot that tightens down when the animal puts his head through it and lunges forward. Place at least 15 for every one animal you wish to catch along den openings and well-traveled trails.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ All birds can be eaten (and so can their eggs). A heavy stick thrown at a flock of birds may knock one to the ground, but the best method is to capture ground-living birds like pheasant, quail, etc., by using snares or a trench trap.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

▶ Consider using a hook and bait for scavenger birds, similar to catching a fish. Hang the hook and bait from a tree. Leave some slack so the bird has time to swallow it and take flight.

— CLIVE JOHNSON, SURVIVAL TIPS: 150 WAYS TO SURVIVE EMERGENCY SITUATIONS

▶ All manner of rodents can be eaten, but if it feeds off of trash, discard the head and guts before eating. Construct a rodent trap by placing a bucket in the ground with a piece of bait hanging over it. Line the bucket with plastic so the animal has difficulty climbing out.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

▶ The most abundant supply of meat for any given area in any given weather condition is around water. If you are near a waterway, try to stay near it. The flesh of all freshwater fish is edible.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

### SNARE LOOP SIZES

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

The snare loop should be sized according to the size of the animal you expect to catch, just large enough for the head to project through:

**Rabbit:** 3 inches in diameter, 4 inches off the ground

**Fox:** 5-6 inches in diameter, 8 inches off the ground

**Boar:** 8-10 inches in diameter, 12 inches off the ground

**Deer:** 30-10 inches in diameter, 48 inches off the ground





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# Gear Guide



## FOOD

## Food...On The Go

Your Go-To Energy Sources When There Is Absolutely No Time to Stop By Michael D'Angona

WHEN TRAVELING, the luxury of stopping, building a fire, and cooking a meal is not always a feasible option. Making good time is important, yet you need calories to keep your body functioning under survival or emergency conditions. You do have a viable option, however, in the form of compact, high-calorie foods that store easily in clothes pockets and are accessible within seconds when needed. These high caloric foods range in variation from diverse trail mixes to complex energy bars to

simple chewable tablets and candy, yet all accomplish the same result — a surge of much needed energy when the feeling of fatigue and exhaustion begin to overtake you.

When choosing products for your supply bags or mini-emergency kits, be sure to check the expiration dates. Most have an extremely long shelf-life, but make certain before purchasing. Always feel the vacuum seals of energy bars and tablet bottles carefully. If the package moves easily within your fingers or the lip of

the seal is lifted, air might have entered. This severely decreases its freshness or possibly spoiled the product all together. Before buying large quantities, taste some samples first. Is it somewhat pleasing? Does it have a good texture in your mouth? Although taste should be your least important characteristic of survival food, pre-tasting is very important to avoid any surprises upon first try. Remember, if you can get needed calories and a burst of energy with a good taste...then all the better





## Mayday 1200 Calorie Bars

High calorie food bars are the backbone of “no fuss” survival food. The Mayday food bar is exactly what you need to survive when on the move with no other food sources are available. Featuring a shelf life of five years, these bars can be packed into your bug out bags and forgotten...until the time comes when you need them! Using the recommended three bars per person per day, you can supply yourself with much needed calories and vitamins and escape starvation when out in the wild or staying put in your designated bug-out location. These bars are non-thirst provoking, easy to eat with no preparation, and they offer a tasty honey sweetened apple cinnamon flavor. 200 calories per serving and only 75 calories from fat. This is a staple of all survival or emergency kits!

Source: [AugasonFarms.com](#)  
MSRP: **\$114.89** (case of 36)

## SOS Emergency Food Bar

When you need a quick bite, why not have a food bar that tastes great and meets all your survival prepping needs? The SOS Emergency Bar does just that. Packing an amazing 410 calories per bar, this valuable survival item keeps you going when a full meal is not an option. The easily digestible formula is compatible with drinking water restrictions which make it perfect to eat while under emergency conditions. Each bar is packaged to withstand temperatures from -22 F to 149 F and has a shelf-life up to a five full years. Pack several in your Bug-Out Bags, glove compartments, and alternate Bug-Out locations for long term food storage or in your pocket for a short term food source when “out in the field”!

Source: [MorePrepared.com](#)  
MSRP: **\$3.95**





## Survival Bar Variety Pack

Whether you are under a survival situation or just need a burst of energy during your workout, these delicious Survival bars are just what you need. These tasty snacks are nutritionally balanced using raw superfoods and 100% organic whole food protein. This variety pack has flavors everyone will enjoy, including cinnamon explosion, garden fusion, cranberry blast, apple surge, blueberry burst and the delicious original flavor that started it all. Always keep several of these high performance bars on hand when hiking outdoors, camping, exploring or working out in the gym to keep your energy levels high and to fortify your body with much needed muscle building protein.

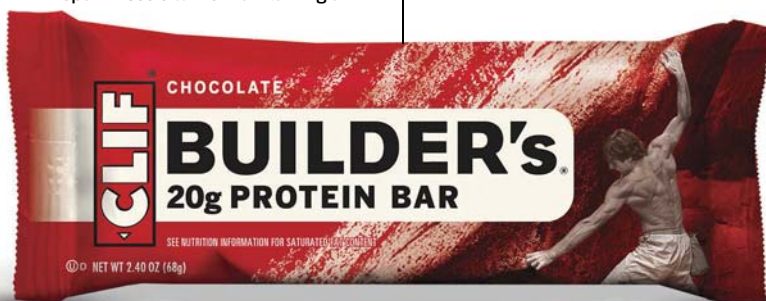
Source: [MyhDiet.com](http://MyhDiet.com)  
MSRP: **\$34.95** (box of 12)

## Clif Builder's Bars

Under stressful emergency conditions your body can expend a lot of energy. Clearing debris, helping others to safety or when traveling constantly, your body needs to replace the calories, protein and carbohydrates lost. Unfortunately, time is not on your side and the luxury of a sit down meal is not an option. Packing Clif Builder's bars in your pack or stored where you can grab them and go is an ideal solution to your food intake needs. Each 2.4 oz. bar contains 20 grams of high-quality protein and 29 grams of carbohydrates enabling you to build and repair muscle while maintaining an

energy level needed to meet the demands of an unforeseen emergency. These delicious Clif Builder's bars have zero grams of trans fat and no partially-hydrogenated oils or high fructose corn syrup, so they won't harm your body while sustaining your hunger and energy level. Available in nine tasty flavors including chocolate, chocolate mint, vanilla almond, s'mores, crunchy peanut butter and many more.

Source: [ClifBar.com](http://ClifBar.com)  
MSRP: **\$21** (box of 12)

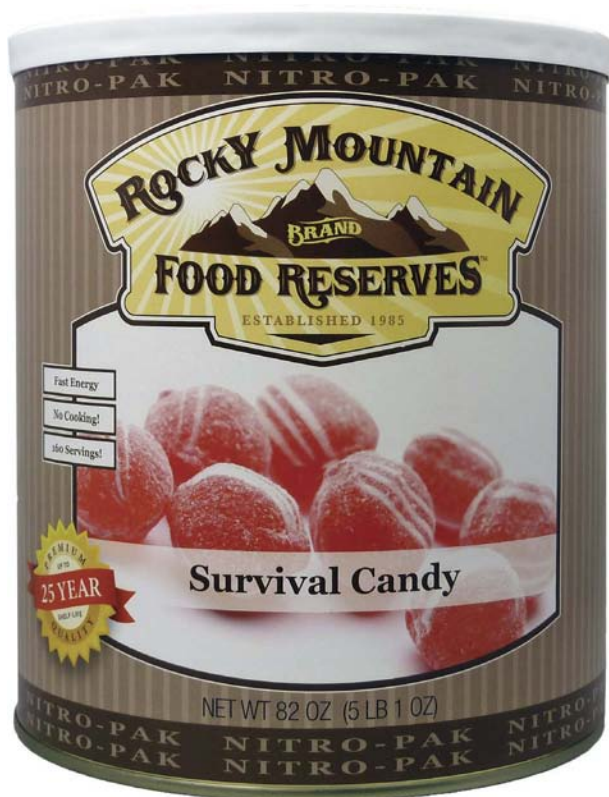


## Taste of Nature Organic Snack Bars

Need a tasty snack that is delicious and nutritious? Then look no further. The Taste of Nature organic snack bars are made with only the finest ingredients available. They provide you a quick tasty bite without unneeded additives, fillers or artificial flavors. All varieties of these natural bars are certified 100 percent organic, non-GMO project certified and gluten-free. All the "good stuff" are packed into these pocket snacks like high fiber, healthy carbohydrates and, above all else, delicious natural ingredients to make your traveling treat the tastiest it can be. Six varieties (1.4 oz.) to choose from including Cranberry Caramel, Blueberry, Apple, Almond, Peanut and Nut Fiesta. The perfect snack anytime, anywhere.

Source: [TasteofNature.com](http://TasteofNature.com)  
MSRP: **\$1.79**





### Rocky Mountain High Energy Survival Candy

Hard candy is a good source of carbohydrates when you need a quick burst of energy. Rocky Mountain Survival Candy turns it up a notch and makes it a great source of much needed caloric intake. Each serving provides 50 calories of nearly instant energy, perfect when you are "on the move" and fatigue begins to set in. Rocky Mountain candy uses only

the highest quality ingredients which make each piece not only tasty, but perfect for long term storage applications with a 30-plus year shelf life. Complete meals are perfect when you camp, but for an easy-to-eat, carbohydrate supplement survival candy will provide a sweet and very productive treat!

Source: [Nitro-Pak.com](http://Nitro-Pak.com)  
MSRP: **\$17.09**

### Kind Bars

Kind bars provide variety for everyone's taste. These delicious grab-n-go snack bars are available in dozens of tasty combinations. From nuts & spices to fruit & nut, to fortified combos with antioxidants, the choice is yours. Created with no artificial ingredients and no complex additives, these scrumptious bars use only all-natural whole nuts, dried fruits, nutritious grains, sea salts, cocoa powder, and many more natural ingredients. Fuel your muscles and your taste buds while providing your body essential nutrients like fiber, protein and antioxidants. Gluten-free, low sodium, low glycemic and a great source of fiber, these bars are not to be forgotten for any outing!

Source: [KindSnacks.com](http://KindSnacks.com)  
MSRP: **\$1.29**



### Chocolate Energy Energems

Survival situations do not give you the luxury of even the simplest everyday enjoyments including most people's favorite — coffee. Their morning cup gets them up and moving and the kick starts their day. Now you can have all the advantages of a cup of Joe anywhere and anytime, no matter what disastrous conditions you are facing. Each box contains nine gems. That's three servings, or more precisely, three "cups" of coffee ready for you, all packed in rich chocolate and covered in a crunchy candy shell. Energems contain needed caffeine for a boost and also L-theanine, a natural supplement for improved memory, focus and concentration — three traits needed for short or long term survival. Chocolate, Mint and Peanut Butter flavors make up this tasty jitter-free trio.

Source: [EnerGems.net](http://EnerGems.net)  
MSRP: **\$8.97** (3 boxes)







### Pro Series Energy Chews

Need energy? Pop a chew or two. Muscle milk energy chews are a convenient means to supply your body with needed fuel. They allow you to keep pressing on even when lag starts to set in. These tasty chews deliver essential electrolytes and a rich blend of carbohydrates that provide a boost to maintain top performance needed during work-outs, strenuous activity or just

trying to survive under emergency conditions. Each pouch contains 80 mg. of sodium and 40 mg. of potassium, both vital to replenishing vital electrolytes lost during prolonged sweating. Available in tropical or orange flavor. No artificial sweeteners or colors added.

Source: [MuscleMilk.com](http://MuscleMilk.com)  
MSRP: \$1.97



### Caffeine Chewing Gum

Originally developed for the military forces, now available for you, caffeine-enhanced chewing gum keeps you alert both physically and mentally. This revolutionary gum is ideal for a quick burst of energy due to its rapid absorption rate through chewing and the generation of saliva. Each piece of gum contains 100 mg of caffeine; equal to the amount found in a six ounce cup of coffee, yet is absorbed five times faster than your favorite cup of "go-go" juice. When sleep becomes secondary, and your life may depend upon you staying awake, keep this gum handy at all times. Packs easily in almost any pack, bag or back pocket. Flavors include cool arctic mint, hot cinnamon, and tasty spearmint.

Source: [MilitaryEnergyGum.com](http://MilitaryEnergyGum.com)  
MSRP: \$7.65 (six-pack)



### Planters Nuts & Chocolate Trail Mix

Trail mix has been an outdoor tradition and favorite for years. Planters now kicks it up a few notches with its Nuts & Chocolate assortment, providing a wholesome source of energy, complemented with a delicious taste. Roasted peanuts, almonds, plump sweet raisins and chocolate candy bits provide energy for any wild adventure or simple outdoor camping trip. Each 3 tablespoon portion provides 150 calories, 2 grams of saturated fats, 5 mg. of sodium and 11 grams of sugar, a perfect balance to feed all your body's needs. The resealable 6 oz. pouch maintains freshness and easy accessibility whenever hunger strikes.

Source: [Planters.com](http://Planters.com)  
MSRP: \$2.39



## Travel



Sometimes, if the location you are in isn't satisfactory — dangerous, crowded, hostile, harsh weather — relocation is your only choice for the sake of safety or rescue. Provided nobody is injured in your party and there aren't any rescue crews actively searching for you, it might be a good idea to begin hiking toward civilization. Know that travel isn't easy and there are dozens more variables you face compared to staying put.

▶ Learn at least simple navigational skills and how to use a map. Many carry a map and a compass but cannot use the two in conjunction together to triangulate their whereabouts.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ When you frequent the wild areas; slow down to a more "natural" pace. In nature, the only things that are moving erratically and quickly or making lots of sound are animals in distress or those fleeing from some imminent danger. To learn for yourself what your "natural" pace is (at home) remove your shoes and socks and learn to walk comfortably without making a lot of abrupt or erratic movements.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ Before trekking into the forest, always tell someone where you're going and when to expect you back. Doing this will not only shorten the length of a survival scenario should something go wrong but it could save your life.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

▶ Always dress appropriately for the environment you plan to be in. Wearing several layers will allow for thermo regulation via the adding and removing of layers as needed. The idea is to keep



sweating to a minimum in cooler temperatures.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

▶ To determine how many hours of daylight are remaining in the day, extend your hand out toward the horizon so the sun rests on your top finger. With your palm facing you, count 15 minutes for each finger needed to reach the horizon. Four fingers equals one hour of direct sunlight.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

▶ Buy a compass (like a Silva-type) with a device called a romer, which has right angle marks in tenths. This enables you to give a six-figure grid reference at a glance for better location accuracy.

— BOB CARSS, THE SAS GUIDE TO TRACKING

▶ Exhale when your left foot hits the ground to avoid cramps while running.

— KEITH BRADFORD, LIFE HACKS

▶ An acorn cap can be made into a signal whistle if you ever get lost in the woods.

— KEITH BRADFORD, LIFE HACKS

▶ Have a map of your intended bug-out routes, marking locations of interest, including police and fire stations, hospitals, and water sources. Also mark areas to avoid.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

▶ Cash is king. During a crisis, ATMs and credit card terminals may be down, and banks may be

closed. Keep enough cash on hand to help get you out of town. Small bills are best; spread your stash between different pockets, and keep some hidden in a travel-style waist wallet.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

▶ When crossing a creek during the winter time, loosen your pack's shoulder straps and undo your waistband so you can quickly remove your pack if you fall in.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ When travelling in mountainous terrain, try to stay high on the ridgeline as much as you can. It is better to travel a little farther than to deal with the constant up-and-down travel associated with frequent elevation changes.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ Forced to travel through marshy swamps? Wear pantyhose underneath your pants to avoid leeches attaching to your skin.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ To start a car with a dead battery, pry open the inspection lid of the battery — provided it is not permanently sealed — and add two crushed aspirin tablets. Fill the battery with water to the correct level. The acetylsalicylic acid in the aspirin combines with the sulfuric acid. This also works with four tablespoons of Epsom salt.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ If your radiator is springing a small leak or a series of pinhole leaks, two teaspoons of black pepper will fill the holes, while the whites of an egg will clog up larger holes.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS



# BURIED TREASURE

**SECRET STORAGE:** MTM'S SURVIVOR CONTAINER SEALS UP YOUR EMERGENCY SUPPLIES SAFELY UNDERGROUND.

Story and Photography by **Thomas Sanchez**



**Y**our much-prized gear and equipment won't do you any good if someone steals them, and sometimes keeping your stash a secret is difficult to do when your neighbor takes a cursory interest in being prepared but doesn't actually want to do any of the work.

By explaining what to buy, where to store it, and what to do with it when you need it, you've exposed yourself to a possible unsavory situation when something does hit the fan. When, in the middle of the night, days after molten pyroclastic flows from a sudden split in the tectonic plates have decimated your housing tract and everything in a three-mile radius, you wake up in your backyard tent to discover that same neighbor digging through the rubble of your charred garage looking for your ammunition. Well, the joke is on him because your ammo and some other essential gear is safely stored, literally under his feet.





"...YOU CAN'T JUST DIG A HOLE NEXT TO THE AZALEA BUSHES BY THE WALL,  
DUMP A BUNCH OF STUFF IN IT AND COVER THE HOLE WITH DIRT...YOU NEED A SECURE SYSTEM..."

For hundreds of years, pirates buried the treasure plundered from ports and ships on various island hideouts across the Caribbean. For example, Norman Island, about five miles southeast of St. John in the U.S. Virgin Islands, was a place well known for its buried treasure, most famously for the 55 chests of silver coins plundered during the mutiny of the *Nuestra Señora de Guadalupe* in 1750.

Pirates learned it was the best way to keep the booty safe from other pirates and the various governments looking to recoup their losses. Much like putting your money in a bank where others can't reach it, today, burying your valuables is a sound practice in an insecure climate, ensuring that those items will be secure (as long as they are well hidden). What if there are no banks tomorrow?

This is even more important for things you can't keep in a bank, like ammunition, weapons, emergency supplies, and anything you will find useful in the days and weeks that follow certain catastrophe.

However, you can't just dig a hole next to the azalea bushes by the wall, dump a bunch of stuff in it and cover the hole with dirt. In a matter of days, moisture will rust anything metal and deteriorate everything else. By the time you return, there will be nothing but a useless rusted hulk. You need a secure system in which water and air cannot reach, as those two elements are rust's best friends. MTM's Survivor Container is such a system.

It features a rugged, bucket-style body with two o-rings that seal the lid and a protective outer cap. The inner lid is held down

The versatility of MTM's Survivor Container is limited only by your imagination and needs. Installing several of them around your property as a last-minute effort to retain valued and useful possessions is a good idea. One can be for guns and ammunition, the other can be used to store emergency supplies like food rations and survival gear. Redundancy is key.



## BURIED TREASURE



With over 273 cubic inches, the capacity allows for a considerable amount of gear. Within this container is enough ammunition for several firearms lasting for several months. Including a pistol is a wise option as well.



On the emergency side, creating a “bug-in” container means that, no matter what happens topside, underground you know you’ve got a host of supplies and gear to help outlast whatever calamity you’ve encountered. Shown in addition to a redundant .45 and ammo are knives, flashlight, emergency food and water as well as some necessary survival gear. Also consider storing some cash, important documents, and perhaps even a flash drive with some pictures on it to help identify you and your family.

with multiple screws to provide a secure seal from the elements found underground, while the larger top fits in place over the whole assembly. Each container includes a heavy-duty vapor corrosion inhibitor (VCI) plastic bag plus a moisture-absorbing desiccant pack. The 12.4 x 7-inch internal dimension equals a capacity of about 273 cubic inches, which is about 4.5 liters of space. According to MTM, the Survivor Container will hold up to 600 rounds of .45 ACP, .223 ammo, or about 15 to 20 AR15 magazines. Its capacity is exactly the same as a standard .50 caliber ammo can.



The vapor and corrosion inhibitor plastic bag is an additional seal to keep out unwanted moisture from the surrounding Earth. Make sure to seal the bag closed tightly. Using a vacuum sealer (the kind used in keeping food fresh) to remove excess air and to bond the bag closed would be best.



Inside the bag is a desiccant pack. These are filled with silica gel pellets, an otherwise inert, nontoxic, water-insoluble white solid that removes moisture from its environment.

### HIDING YOUR STASH

It is important to keep the location of your container(s) a complete secret, otherwise it defeats the purpose of having them if others can get at them. The hole can be located virtually anywhere you’re confident nothing will be built over it, which is easy to do on your own property. But if you are creating breadcrumbs to be found in an emergency situation, be relatively sure that when you go to dig up your stash someone’s house hasn’t been built over the top of it.

### WHERE TO DIG?

For best results, the container’s placement should be out of the way of trees and utilities. Dig the hole somewhat deep, at least twice the height of the container, or about three feet down, giving you about 18 inches of cover. However, the less dirt you remove from the hole, the less you’ll need to return, so make your hole just wide enough to shoe-horn in the container. When you go to cover up the container returning all of the dirt is impossible because of the mass the container





Dig the hole that will hold your container as deep as you wish. The deeper the hole, the less likely someone will stumble upon it... but the deeper the hole, the more likely you will lose it. Take and keep exact measurements as to where your container is buried.

"REMEMBER, THE CONCEPT OF THIS SYSTEM IS A SAFETY NET TO BE USED IN AN EMERGENCY SITUATION. IT ISN'T LIKE A SAFETY DEPOSIT BOX AT THE BANK OR THE LOCKERS AT THE SKATING RINK. ONCE THEY GO IN, THEY CAN'T COME OUT."

takes up. But the dirt you do return will compact over time, creating a divot. This is obvious to anyone looking for something buried when they come across a depression in the ground. Mounding the dirt slightly will combat this, but it is a great idea to return the area to exactly what it looked like before you started digging. Were there leaves and grass strewn about? Replace them and leave no trace that you were there.

### PACKING THE SURVIVOR CONTAINER

Like bagging groceries at the store, put the heavy things on the bottom. You know the container will be buried upright (it has to be), so if you plan on including a handgun or a large box of ammo, put them on the bottom, so the more fragile items, like the pouches of water or the light sticks won't be damaged over time.



The two o-rings of the container's lid makes sure it stays water and air tight for long periods of time.



The lid is secured to the barrel via six screws. These compress the two o-rings on the lid. Make sure to alternate screwing down the screws from one side to the other to make sure the lid is secured evenly.



Place the cover over the barrel. This lightly snaps into place and is used to disperse the weight of the dirt that's placed on the container.

## Leaving Bread Crumbs

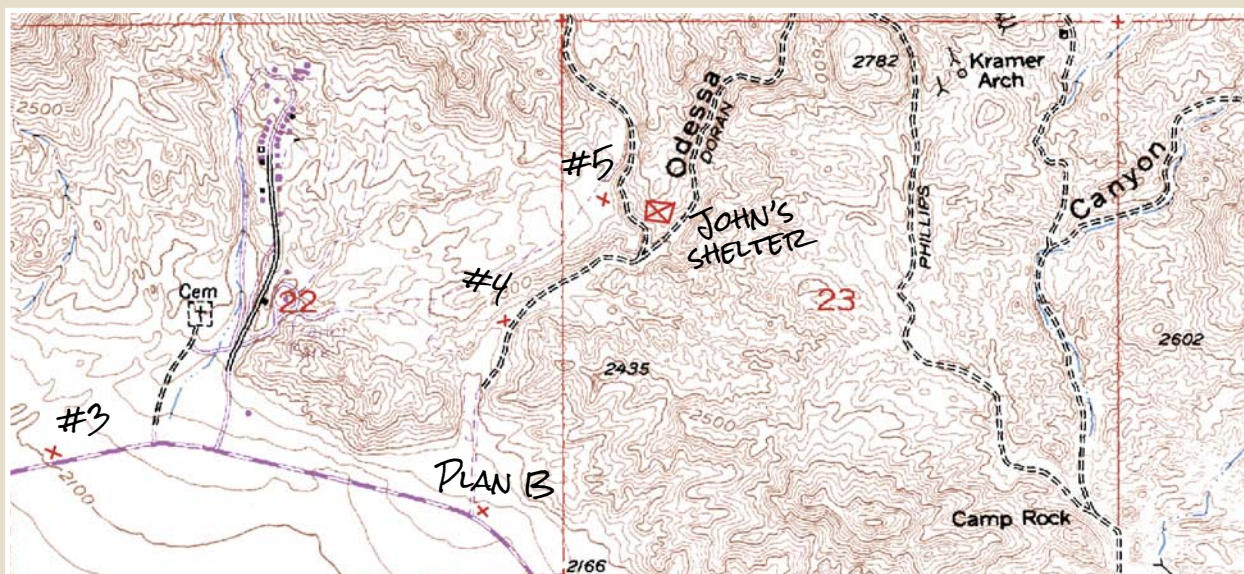
The rear-view mirror of your Jeep is filled with fire and smoke, as the last remnants of your town crumble into chaos. You've escaped! Ahead, in the wind-swept deserts miles from anywhere (and any-

one) is your secret bug-out shelter you've been working on for years. Aside from a small hatch that leads underground, it is virtually undetectable but spacious for you and your family. Getting there might be a problem. Checkpoints and thieves may block roads. Your cash, food, or water may be confiscated. You may end up having to walk the last 20 miles. What then? What if you're left with

nothing, and the means to even get to your bug-out shelter is compromised to the point that you might not make it. What then? Luckily, you were smart. You've thought of everything.

Along the route to your bug-out shelter, you've placed a series of breadcrumbs in the form of MTM Survivor Containers. Each one, hidden underground along the route to your shelter, contains

enough supplies to keep you and your family going until you've reached the next one. Like Hansel and Gretel, you've created a series of breadcrumbs to find your way to safety. Additionally, scattered around your bug-out shelter, you've buried several more, each one a redundant cache of gear you might need if stuck outside your shelter and not able to return until it is safe (or not being watched).



Of course, with this many containers spread out over such a wide area along the route to your bug-out shelter, you'll need a map to remind you of where they are. Make sure the map doesn't fall into the wrong hands, however.

### SOURCE

mtmcase-gard.com  
MSRP: \$19.95 each

This is a trick to make it slightly easier to find your buried container long after you may have misplaced the notes to its location. Cover the container with dirt and then throw a couple of aluminum cans about six inches below the surface and then bury them. This works doubly as a location marker for you and as a distraction for would-be searchers.

Remember, the concept of this system is a safety net to be used in an emergency situation. It isn't like a safety deposit box at the bank or the lockers at the skating rink. Once these items go into the ground and you cover them with dirt, the only reason you should be accessing them is if you are on the run and in mortal fear for your safety or civilization has crumbled down around you. Otherwise, they're there for good.



Don't forget the desiccant pack. Though the container is designed to keep moisture out of it, it won't remove the moisture you introduce at the time of packing. The silica gel can adsorb about 40 percent of its weight in moisture and can take the relative humidity in a closed container down to about 40 percent.

### HIDDEN TREASURE

When your world as you know it comes to an end and everything in your life is decimated beyond use and function, at least you'll have the reassurance that there is a small but smartly packed container of gear, weapons, equipment, resources waiting for you in a musty, dark hole beneath the Earth that only you know about. MTM's Survivor Container is exactly that, a container to ensure your survival. **ASB**



# Finding Your Buried Cache

**Probably more important** than taking the effort and time to collect and bury a secret cache of ammo, gear, and equipment is your ability to find it when you need to. The most reasonable way to do this is to keep very specific notes and a map as to where they are all located. If the containers are buried on your property, mark them with a distinguishable rock or a stepping stone. Barring that, place your containers a specific distance from certain landmarks; for example, 15 feet from the northeast corner of the patio or equidistant between the two pine trees behind the garage. Doing so will create a mental image that will last a long time. If you have buried multiple containers, it would help greatly to make a map of your yard with them located. Place that map somewhere secure for safe keeping.

What if you lost your map or your memory, or the landscape outside your four walls has changed so greatly that locating your containers by landmarks is impossible? What then? Well, if you followed the suggestions by placing a couple of aluminum cans a few inches below the surface where each of your containers are buried, you should have little difficulty locating them again by using a metal detector. The MX300 Stryker Lite metal detector comes with a touch screen. It is easy to operate and uses GPS technology allowing you to save up to 10 locations. Use the large touch screen to select elimination modes, HD audio tones, and to check signal strength and depth indicators. This metal detector can detect quarter-sized coins up to 11 inches away.

Made mostly from plastic, it is very strong and well built. The double-D coil is rugged and even submersible. The controls are easy to use and very responsive to changing soil types and terrains. With a little practice, we were able to easily locate our container, which was buried in an open field at about 18 inches. To be fair, the metal detector located the aluminum cans we buried on top of the container, but the results were the same. We were able to retrieve our cache.

Of course, metal detecting is a wonderful leisure sport enjoyed by thousands of people, but that is a story for another time.

## SOURCE

groundefx.com | MSRP: \$299.99

The touchscreen is easy to use, but it did take us a while to turn down the sound that emitted with each push of a button. Once that was done, making changes to the settings was quick and intuitive.

## Specifications

- 11-inch submersible double-D coil detects metal while eliminating trash and junk
- Touch screen technology with 5-inch display allows simple touch operation
- GEO-X GPS technology allows saving and locating up to 10 waypoints
- Precision Search Technology (PST) increases accuracy to reduce dig size
- Easy-to-tune and easy to use back-lit interface with depth indicator
- Easy built-in trigger activates pinpoint mode with a simple squeeze
- Two digit target ID and meter tells you what's in the ground before you dig
- 3.5mm headphone jack
- 8HD identifying audio tones and headphone jack
- Four elimination modes: All-Metal, Coin, Jewelry and Custom
- Eight metal categories and highly adjustable discrimination
- Built in LED light to help see in the hole while digging
- Uses 6AA cell batteries



The double-D coil detects metal, while the on-board computer system eliminates not only the clutter that complicates the searches but can be adjusted to compensate for iron and other metal elements in the soil itself.



In no time, we were able to locate the exact spot under which our container was buried. The detector emitted a specific tone that suggested random aluminum, which any person searching for buried loot would discount as trash and move on.

## HOW TO MAKE A SIMPLE AND INEXPENSIVE STOVE FROM A SODA CAN

Story and Photography by **Ryan Lee Price**

# 10¢ Stove

**T**here are a dozen reason why you shouldn't start an open fire: You're in an enclosed space; you're trying to conceal the smoke; or you want something you can extinguish quickly and easily. One of the prime reasons a small camp stove is an invaluable tool to your survival is that you have complete control over its flame. It is contained in a small space and with the proper fuel will burn efficiently and effectively, cooking, warming, or illuminating. However, in a survival situation, you might not always have a stove handy, but there is one thing you can count on in today's society: You find trash

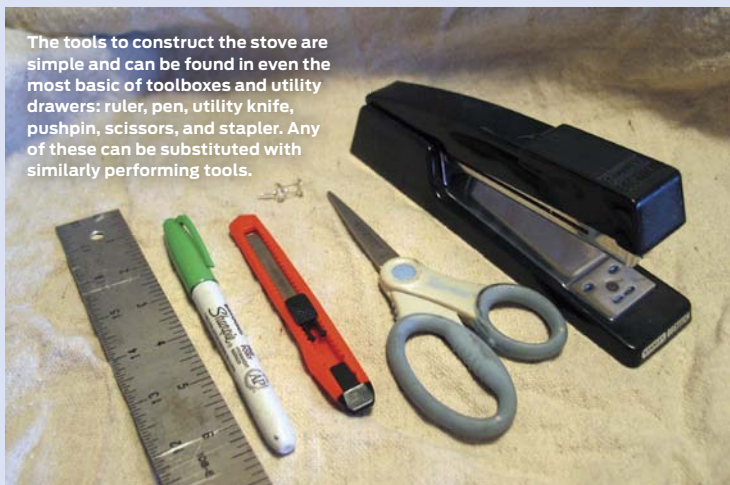
everywhere. The likelihood of you stumbling upon a couple of beer or soda cans the day after doomsday is particularly high if you are anywhere near where people have been. People are litter-bugs, and as survivalists, you can always use that to your advantage.

Building a small double-walled camp stove out of a couple of aluminum cans is easy and can be done in about 10 minutes with minimal tools. In fact, the whole thing can be made with a simple pocket knife. But if you want to prebuild a couple of them to stash in your BoB for later, it is easier if you use a sharp utility knife, scissors, a pen, a pushpin, a stapler and a ruler. **ASG**

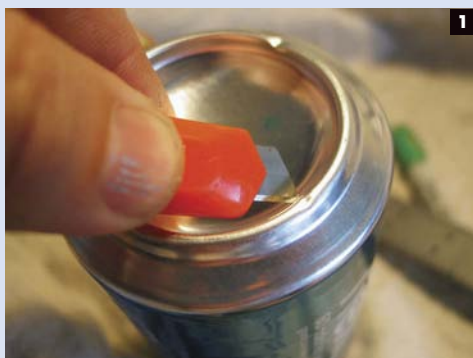




To start, you'll need to source two traditional 12-ounce or larger aluminum cans. We're interested primarily in the bottoms of these two cans and a strip cut from the body of one of them.



The tools to construct the stove are simple and can be found in even the most basic of toolboxes and utility drawers: ruler, pen, utility knife, pushpin, scissors, and stapler. Any of these can be substituted with similarly performing tools.



**1.** Start by washing out the cans (you'll thank us when you don't have to clean up soda or beer from your workbench). With the utility knife, cut out the convex disk from the bottom of the can.



**2.** You'll have to make several passes around the inside lip of the bottom, but the disk should easily pop out.

**3.** The edges are sharp so a few swipes of some 180-grit sandpaper will clean up the edges. This is optional, as you won't have any contact with those edges anyway.

**4.** Our stove will be about 1.5 to 2 inches tall, but the overall height doesn't matter. Resting on something within that range, use the pen to draw a line around the body of the two cans.

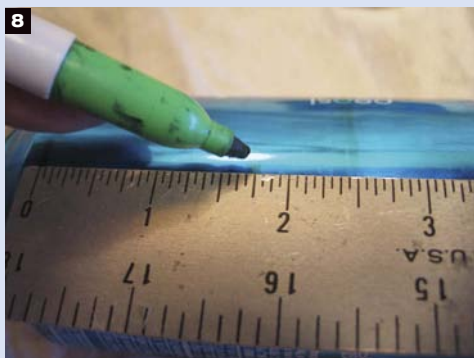


**5.** Yours might be taller or shorter. Either way, measure the height of the line from the bottom of the can. Ours is just over 1.5 inches. Remember the measurement.



**6.** With the scissors, cut off the bottoms of the two cans at the line.





**7.** Though the edges are a little rough from the scissors, remember, this is a survival situation, and it doesn't need to be perfect. It just needs to work correctly.

**8.** Turning our attention to the body of one of the cans, measure and mark two lines so that they are approximately 0.25 inches farther apart than the height of the cut bottom. In our case, we need a strip of aluminum just over 1.75 inches wide.

**9.** Cut the strip from the can and clean up one edge with the utility knife.

**10.** Measure the width again to make sure it is exact and even and trim off the leftover aluminum.

**11.** The strip will be the inside wall of the stove. It should fit snugly around the inner lip of the stove top (the can we cut the bottom disk out of). Give it a test fit to make sure it fits well. Wrap the strip around itself and hold it together.

**12.** To keep it from unraveling, staple the ends together on the top and bottom.

**13.** On the bottom of the inner wall piece (the end that will go on the bottom of the stove), cut two small notches, one on either side. These are so the fuel can pass through the wall.

**14.** This step is slightly fiddly. Slip the top piece (with the hole cut out of it) inside the bottom piece, while making sure the inner wall lines up around the lip of the top. Squeezing it together will press the inner wall into the rim of the punt on the bottom of the can and behind the lip on the top. The end result is a solid-feeling puck that won't fall apart easily.





**15.** Around the perimeter of the top of the stove, use the pushpin (or equivalent) to puncture about 16 holes. Do them in groups of four so they will be even all the way around (an even flame cooks better).

**16.** How it works: Thanks to the convex punt on the bottom of the soda can, the fuel drains through the holes and into the space between the walls. When lit, air is fed down the main throat of the stove and the flames jet up through the 16 holes punctured around the perimeter.

**17.** The fuel of choice for our stove is denatured alcohol (ethyl alcohol with methanol added). Not only is it cheap and easy to find, it burns very cleanly and can be used indoors even in the tight quarters of a tent.

**18.** That is quite an impressive flame. More importantly, it is compact and easily controllable. It produces very little smoke, not much light, but a lot of heat. The outer wall stays relatively cool (around 115 degrees F), while the inside of the stove itself heats immediately to over 400 degrees.



## ALCOHOL AS FUEL

The beauty of these little stoves is they work fine with most kinds of liquid fuel, from white gas to alcohol, so it is flexible in the field, depending on whatever kind of fuel you happen upon. However, it works best with alcohol, and there are several different kinds:

**Denatured Alcohol** (AKA: ethanol with methanol, methylated spirits, shellac thinner, marine stove fuel, liquid fondue fuel, chafing dish fuel): This fuel has up to 80 percent methanol and other poisonous chemicals in it. To test the suitability of a particular brand burn a small amount in a dish and reject it if there is any residue left after it has burned.

**Grain Alcohol** (AKA: pure ethanol, pure grain alcohol, rectified alcohol, medical-grade ethanol, ethyl anhydrous, moonshine): This fuel works well but is expensive and may be illegal to purchase in many places. It is also non-toxic and can double for medicinal uses. With the proper equipment, grain alcohol can be made at home.

**Pure Ethanol** (AKA absolute alcohol or dehydrated alcohol): Since production of alcohol greater than 95.4 percent requires a special dehydration process that includes benzene or glycerine, these fuels can be very toxic and expensive to produce.

**Methyl Alcohol** (AKA methanol, wood alcohol, methyl hydrate, liquid fondue fuel, camp stove fuel, gas-line antifreeze): This fuel is found in paint departments as paint thinner or at stores as gas-line antifreeze (such as HEET—yellow is methanol, red is isopropyl). Methyl alcohol is very toxic and you should consider the health concerns of this fuel, especially around cooking gear.

**Isopropyl Alcohol** (AKA rubbing alcohol): Rubbing alcohol is generally only 70 percent alcohol and won't work in many stoves. Alcohol with 91 percent or greater alcohol content will work, but will leave a sooty residue on your pot and brown water in your stove. The heat potential for this fuel is high, but it doesn't generally burn completely (yellow flame and unburned soot).

**Gelled Alcohol** (AKA Sterno, jelled alcohol): This is either methanol or ethanol trapped in a calcium acetate that forms a gel. This gel is a little safer to use than liquid alcohol since there is less of a spill hazard. Unfortunately, most gelled alcohol stoves have small top openings and often don't get food hot enough to cook or bring water to a boil.



# Into Thin Air

## PREPARE YOURSELF FOR MOUNTAIN CLIMBING ADVENTURE AND SURVIVAL

Story by **Kevin Estela** | Photography by Simon Frez-Albrecht

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**I**n 1923, famed mountaineer George Mallory was touring the U.S. to raise money for an upcoming expedition to Mt. Everest. As most accounts state, when asked by a reporter why he would dare to climb the tallest mountain in the world he replied with a very simple answer, “because it’s there.”

---

While this answer sufficed then, more elaboration is needed today to reach a better understanding of why growing numbers of people are pursuing adventure at higher altitudes. Everyone has a different motivation to explore the mountains — escapism, physical challenge, accomplishment, a feeling of Zen. Mountaineering can provide great rewards but can also exact heavy tolls if caution is thrown to the wind. Prior to venturing out among the clouds, the aspiring mountaineer must understand the risks associated with the pastime and ready himself to mitigate the risks through training and preparation.

### ASSUMPTION OF RISK

Most trailheads leading to high angle destinations clearly post “proceed at your own risk” and “dangerous conditions.” Mountain climbing is inherently dangerous. Weather patterns are predictable in their unpredictability. One moment can be filled with blue skies and the next can be storm clouds and high winds. Gear can be carried to



address these environmental concerns but no one wants to use this foul weather gear if they can avoid it.

The human error element of danger is less predictable if the aspiring mountaineer is unaware of the risks he or she takes. As the number of a climbing party increases, the number of potential bad decision makers also increases. I've witnessed novices winter hiking in jeans and other inexperienced hikers making "speed ascents" with just a hydration bladder. There are no victims in mountaineering, only volunteers. The first step in preparing for emergencies is understanding them. Read accident reports, consult geographically specific guides and speak to rangers whenever possible. There is no such thing as carrying too much information in your head.

## PREPAREDNESS

Only a fool would venture out into the mountains unprepared. The potential for incimate weather and known hazards should be reason enough to pack appropriate clothing and safety gear. Depending on where you are traveling, this will include the skin layer meant for wicking, the mid layer for insulation and the shell layer for protection from the elements. These various layers should be lightweight as ounces feel like pounds when the body becomes deprived of oxygen at elevation.

Accessories like gloves, gaiters, hats and eyewear are also a must for safe travel. Good mountaineering boots should be worn that have a stable sole for travel over rocky trails. Traditionally, Norwegian welt boots offered the best stability in a platform but modern construction allows glued soles to offer the same. Good boots prevent injuries as a sprained ankle can lead to an emergency. A minor inconvenience at lower elevations could be life-threatening in the mountains. Therefore, in addition to clothing, a suitable emergency kit should be carried at all times regardless of the duration of the trip. Items contained in this kit include a compact and



"THE CASES OF EXPOSURE WHEN FALLING INTO A SMALL CREEK OR LOSING BEARINGS IN A WHITEOUT ARE VIVID REMINDERS OF HOW EASILY NATURE CAN TAKE OVER IN THE PERSONAL NARRATIVE."



lightweight knife, water bladders or bottles, fire starter, headlamp, stove, bivy sack first-aid kit with a good blister kit. Depending on the technical difficulty of the climb ahead, one may end up carrying a harness, crampons, ice axe, helmet, rope and other hardware. Studying maps ahead of time and gathering local information is part of the preparation as is carrying the map for your area too. In normal conditions, you may know the best direction to travel for water, for shelter and for safe return via alternate route or loop. You may forget under stress or exhausted or deprived of oxygen, which is why having a map supplement is vital to safety.

#### **PHYSICAL FITNESS/ O<sup>2</sup> DEPRIVATION**

Prior to venturing out in the hills, one must honestly assess their physical fitness. Jogging, running and weighted ruck marches are great ways to prepare for the aerobic demands of backcountry travel. Varying training will best prepare the climber for the

rigors of backcountry travel. Many aspiring climbers find out too late their body doesn't perform the same way at elevation the way it does closer to sea level. Oxygen deprivation masks are popular with athletes to simulate higher elevation and push their body harder during exercise sessions.

It is common for mountaineers to overestimate their ability. It may take days or even weeks to reach the summit of a mountain and on occasion, climbers will forget the final destination is not the summit but where they started. Pushing too far and too fast taxes the body. Refusing to rest also reinforces the idea of the law of diminishing returns. Summit fever can get you killed and one must understand the trip is only half-way over once you reach the top. In this exhausted state, the temptation is there to bivouac when retreating below tree line would be a better course of action. Learning how far you can push your body prior to the trip will let you know when you're about to hit your fitness wall and should turn back.





## NAVIGATION SKILLS

Getting lost in the hills can get you killed. Finding a false summit, a high point that appears to be the peak but is not, drains morale and not knowing which direction to go leads to a slow descent. Navigation is important to the mountaineer and understanding how to read a map and how to orient oneself against the visible topography is a skill that must be developed.

Learning to identify trail markers such as cairns or other known features can help re-establish your location if you become disoriented. Keep track of these points and familiarize yourself with what the trail will look like upon return. When traveling in a climbing party, there should always be more than one person skilled in navigation.

If only one person knows how to navigate and becomes injured, there is no redundant layer of safety. Of course, map and compass skills mean little in whiteout conditions, which can come on quickly. Modern electronics work better in cold weather with

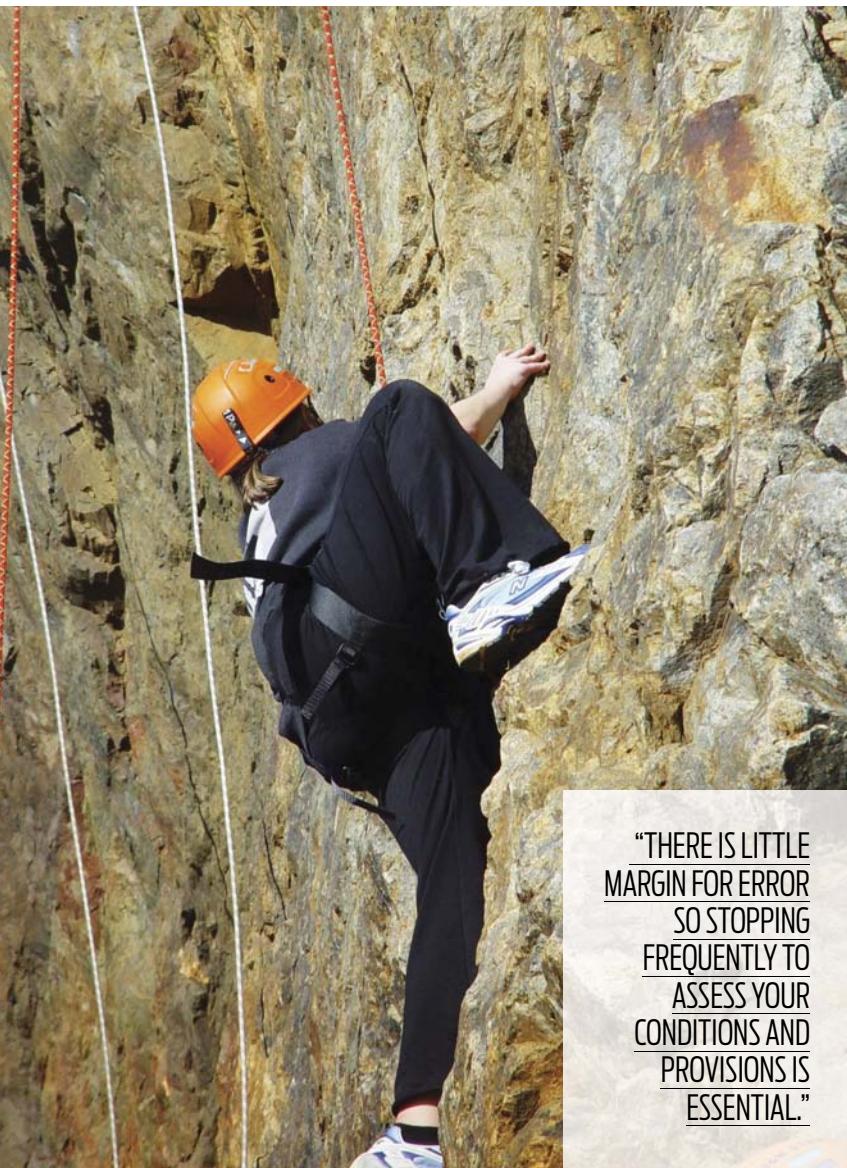
lithium batteries but screens can still freeze and become useless. With near zero visibility, other skills will determine your safety.

## SELF-RESCUE AND SELF-RELIANCE

In the backcountry, it may be hours or even days before a rescue crew can reach you. It is essential therefore to have the knowledge of self-reliance skills to avoid emergencies and self-rescue techniques to respond to them. Injuries from falls are common and on snow covered slopes, uncontrolled sliding can lead to serious injuries. Ice axe carry is a must for snowfields and learning how to employ an ice axe for self-arrest is a necessary skill. Knowledge of knots used for ascending and descending rope is also of importance. Before the days of modern mechanical ascenders, mountain climbers carried prussik loops. If a belay/rappel device is lost, a climber can descend safely with knowledge of the munter hitch.

Learning how to address medical emergencies is another aspect of mountaineering





"THERE IS LITTLE  
MARGIN FOR ERROR  
SO STOPPING  
FREQUENTLY TO  
ASSESS YOUR  
CONDITIONS AND  
PROVISIONS IS  
ESSENTIAL."



self-reliance. Using a closed foam pad, a mechanical splint can be made to brace a broken leg. A reliable stove with extra fuel is an absolute must have item in wintry environments where there is no firewood to burn. To maximize performance, always use a windscreen or build up a snow wall around your stove. Use a camp shovel or stove base to prevent your wire camp stove legs from sinking into the snow. A stove can be all the added difference needed to provide aide to someone trying to warm from the chilling effects of exposure.

Emergency snow goggles that can save your eyes from snow blindness can be fashioned out of duct tape. Two simple pin holes

are made to limit the amount of light that enters the eyes. If bad weather descends upon a climbing party or if advanced medical care needs to be rendered out of the elements, knowledge of how to dig a snow shelter or where to bivouac will determine survivability. Again, in an exhausted state, digging out a cave is not an easy task. Physical training comes into play again.

### **EARLY STARTS AND EARLY RETURNS**

Whenever attempting a summit, I always make it a point to leave early before sunrise. This means traveling in the dark and leaving at a time that allows for maximum use of daylight and enough in reserve for emergency. Weather tends to pick up by midday and it is far safer to be below tree line on your a.m. approach in the dark than it is to be descending in the dark by afternoon or nightfall. Also, the summit is a place for temporary celebration. It shouldn't be seen as a long-term destination. You are extremely vulnerable at the peak and should be aware of changing weather patterns on the horizon.

Make it a point to monitor how long it took to reach your location from the tree line. It will take approximately this long to return to the safety of it at a reasonable pace. Leave early and get back to the trailhead before dark. Frame your trip with this understanding that the mountain will be there to spend more time on with each subsequent trip. Bank your time enjoying the summit in small increments each trip rather than one extended-duration celebration that could lead to descending in the dark.

### **SOLO CLIMBING/HIKING**

There may come a time when you elect to travel solo. I've done multiple solo fair weather summits of high peaks and have always exercised plenty of caution. Whenever possible, I follow a group ahead of me and notify the rangers at trailheads. I avoid high risk activities when traveling solo, such as over snow travel if a longer rocky trail is available. I also know to use effective communication with responsible parties and let them know if I miss two scheduled check-in's, to start our emergency plan. There is little margin for error so stopping frequently to assess your conditions and provisions is essential. Solo Climbing and hiking is generally frowned upon but may be a better option if the only backcountry travel com-



panions are those that make travel more dangerous. Each member added to a climbing party is another link in a chain and that chain is only as strong as the weakest link. Pick your climbing partners wisely and don't be afraid to decline an imposed invitation to join your group. Your safety is more important than a potential climbing partner's sense of belonging.

## THE CALLING

Climbing can elicit strong emotional responses and they are not easily understood by those on the periphery. Why risk dislocated joints, hypothermia, frostbite, broken bones, sprained muscles, torn ligaments and other bodily harm in pursuit of a summit you may not even reach? Sometimes, it is because you have to; an incident or an accident, and you are the rescue party. You've got to make the climb to relieve a survival situation. Other times, civilization and salvation is just over the next peak. **ASG**

# LEARNING FROM REALITY

**Home to the world's** worst weather, Mt. Washington isn't the tallest mountain (standing only 6,289 feet high) but it is at the center of converging weather patterns that deliver record high winds, unpredictable precipitation and limited visibility. Mount Washington's conditions make it a perfect proving ground for testing outdoor clothing and gear that manufacturers regularly see on climbs around the world. In the book, *Not Without Peril*, the author documents the recorded fatalities that occurred on Mt. Washington in a period over 150 years in the mountain's history. Weather aside, the peril of many climbers and enthusiastic outdoorsmen are attributed to not only atmospheric conditions but man-made as well.

Examining the true stories of emergencies on Mount Washington and the other peaks in the Presidential range, it becomes apparent what separates survivors from victims. In most cases, the success stories involve larger climbing parties with the means and training to access advanced help. Awareness of and preparedness for potential accidents is part of the surviving

equation. In more tragic history, climbing during high threat avalanche season and disregarding advice to carry avalanche beacons or backcountry snow shovels leads to disaster.

The cases of exposure when falling into a small creek or losing bearings in a white-out are vivid reminders of how easily nature can take over in the personal narrative. Documented deaths by accidental fall, gear failure or avalanche outline the very real safety concerns overshadowed by flashy equipment and adrenaline culture. Tragic, preventable, shocking, however defined, the actual cases of danger experienced while mountaineering should never be disregarded. The knowledge we have today was learned the hard way and others gave their lives involuntarily for future adventure seekers to avoid the mistakes they made. As outdoorsmen, we owe it to the memory of those who came before us and to ourselves to learn from reality. Before venturing out, take the time to learn the local history and how you can avoid becoming another chapter in a mountain's story.

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**WARNING** – THESE SURVIVAL BAGS ARE NOT FILLED WITH TOYS





## Top Recommendations *for Gear*

### **Koflach Degre Boots**

**(koflach.com):** Mountaineering boots are not normal builds. Over-built uppers, reinforced soles and stiff heel cups prevent ankle rolling, foot fatigue and bruises under weight of heavy pack. Leather or plastic are two options and both should have provisions for mounting traverse crampons with the latter being suited for vertical ice climbing crampons.

### **Petzl Adjama Harness**

**(petzl.com):** An unobtrusive harness is a must for traveling long distance over terrain where tying in is a requirement. A basic webbing harness will do for occasional use but seasoned climbers know to use a padded climbing sit harness. Gear loops allow for carrying belay/rappel devices, mechanical ascenders and other tools.

### **Petzl Elios Helmet (petzl.com):**

A proper fitting helmet will protect your head from injuries sustained in accidental falls and from falling rock and ice. Make sure to purchase a helmet with attachment points for a headlamp. Since many day ascents start before sunrise, travel with a headlamp is inevitable.

### **Petzl Glacier Traverse Ice Axe**

**(petzl.com):** An ice axe is essential safety equipment for traveling in the winter alpine or glacier zones. For correct sizing, make sure the spike is in line with your ankle when you hold it at your side. Learn to use the adze for digging notches and the pick for self-arrest. A leash will help prevent losing it out of your grasp.

ASE



# Gear



## 138 Tips & Tricks from Survival Experts

Although some take delight in the fact that they are skilled enough to head into the backcountry with nothing more than the clothes on their back and a good sense of direction, for the rest of us, a collection of quality gear is essential to our survival. Keep it organized and in good working order and it will serve you well when you need it.



► Build your kit with redundant backups. If you lose your only knife, you lose a key piece of gear. When packing, take a pocket knife, possibly a belt pouch with a multi tool and fire kit with a few items, then have a redundant larger cutting tool in your pack. If you lose or use up these recourses, you will have a back up.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

► Always carry the Five Cs of survival: cutting tool, cordage, combustion, cover, container. These Five Cs are generally the most difficult to make or replicate in nature.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

► If you plan on building a survival kit, make sure you plan and build it according to your personal skill level and local climate.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

► Choose a wilderness style blade made of a high-carbon steel that, when struck with a hard rock such as flint or quartz, will produce a spark large enough to ignite charred material or some funguses.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► Cold steel is brittle steel. Before using an axe in freezing temperatures place the head of the axe inside your jacket for several minutes. This will slowly raise the temperature of the steel so that it is less likely to chip during use.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► Make sure you put your survival gear to the test before it really counts! Don't wait until you're in an actual life threatening situation to try out your survival knife for the first time only to find out you made a bad purchase.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

► Mix Mountain Dew, baking soda, and hydrogen peroxide together to make a homemade chemical light.

— KEITH BRADFORD, LIFE HACKS

► Don't over pack. Walking long distances with a heavy pack strapped to your back is extremely difficult. Pack you bag with the essentials and have a second bag with desirable items. If you need to shed weight along the way, the second bag can be left behind, given away, or traded for other supplies.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

► Have a well-stocked supply of toilet paper, paper towels, disposable plates, plastic utensils, paper cups, heavy-duty plastic garbage bags, five-gallon plastic buckets with lids, antibacterial wipes, gels, soaps, and other personal hygiene products.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

► Always keep the contents of your Get-Home Bag current; rotate your supplies often. Test your equipment periodically to ensure it is working properly. Remember, the day you need it, you will need it desperately.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

► If batteries become too cold they may no longer work. To avoid this, protect your electronic devices in a good insulating material and carry them as close to your body as possible.

— GREG DAVENPORT, SURVIVING COLD WEATHER

► Make a life vest from two condoms and a shoelace. Blow up each condom until it is approximately 18 inches long, tie off the ends and lash each condom end to each other. Sturdy latex is surprisingly rugged and will not pop.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

► You can boost a cell phone's signal with a soda can. By cutting the body of the can so it opens up like wings around the side of the phone, it acts as a parabolic reflector.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

► Pine sap and charcoal can be heated and mixed to create an amazing natural epoxy, a glue-like substance.

— CREEK STEWART, BUILD THE PERFECT BUG OUT SURVIVAL SKILLS

### COOK FOOD WITH A CLOTHES IRON

The iron's adjustable dial can be used to adjust the temperature.

**Linen:** 445°F

**Cotton:** 400°F

**Wool, polyester, silk:** 300°F

**Acrylic, nylon:** 275°F

Seeing is believing,  
but it is also *knowing*,  
and knowing what you  
are faced with may be  
vital to survival.



K. HOUSE PHOTO





# WHAT'S AHEAD?

## THE TOP THREE BINOCULARS YOU SHOULD HAVE IN YOUR KIT

Story and Photography by **James E. House**

**S**eeing is believing. However, how well you see may depend on more than your vision. When your path passes through uncertain surroundings, you may need a closer look. If a vehicle or boat is approaching your location, you need to know whether it is friendly or otherwise. Exactly what is that animal on the hillside along your route or what is that noisy bird? In some cases human vision is sufficient, but in many others it is not. A compact binocular may be what you need.

In former days, binoculars tended to be like the military surplus model my brother borrowed from his biology teacher in the 1950s. That binocular (singular form of an optical device for use with two eyes) was a large, heavy 7X50 Bausch & Lomb, but you sure could see craters on the moon with it because it was bright and sharp. For many years thereafter, commercial binoculars tended to be of that type, but that has changed dramatically. Currently, there are numerous compact models that are both bright and sharp.

### OVERVIEW

For this review, I selected three current compact binoculars I have used extensively. They are the Leupold Rogue, Nikon Travelite VI, and Olympus Tracker PCI, all of which are 8X25 models, so they have the same exit pupil diameter. Having decided which models to test, they were obtained quickly from B&H Photo and Adorama, two of the large suppliers of cameras

and other optical equipment. Current prices of the Nikon and Olympus at B&H are \$79.95 and \$59.99, respectively. Adorama lists the Leupold for \$84.95 with free shipping. All three units were delivered within three days.

All of the binoculars have a central focusing knob and the right hand eyepiece can be focused individually to compensate for any difference in vision between left and right eyes. Each binocular has a focusing dial around the right hand eyepiece with some sort of markings that can be positioned in reference to an index mark on the frame of the binocular. Correctly focusing a binocular is done by selecting an object at some distance and focusing on the object while looking through the left eyepiece using the center focusing knob. Focusing is completed by means of the right eyepiece so that each eyepiece is focused individually for that eye. To facilitate use by persons who wear glasses, the Leupold and Olympus have twist up eyecups but the Nikon has rubber eyecups that can be folded to adjust the length.

A target was used to test sharpness with each binocular mounted on a tripod. After accurately focusing the binocular, I proceeded to examine the rings and fine print on the target. Next, the head of the tripod was rotated so the edge of the view was directed toward details on the target in order to detect any difference between center and edge sharpness.

Optical devices such as cameras and binoculars are subject to two types of distortion. One type is known as barrel distortion, which causes



Leupold is one of the most famous names in optical equipment for outdoorsmen. The Rogue compact binocular is a good choice when durability and weather resistance is required.



The Olympus Tracker PC I is compact, light, and bright, which makes it a good companion when minimum gear is required.



Nikon has been making compact binoculars for many years. The Travelite VI is the latest in a long series of models.

“WITH BOTH THE NIKON AND OLYMPUS, THE IMAGE AT THE INSIDE EDGE OF THE FIELD APPEARED SHARPER THAN AT THE OUTSIDE EDGE.”

straight lines to appear to bow outward away from the center of the field of view. The opposite type of distortion, known as pincushion distortion, gives lines that appear to bow inward toward the center of the field of view. By examining a brick wall with the binocular supported on a steady rest, it is easy to detect either type of distortion if it is very noticeable.

### LEUPOLD ROGUE

As a result of having a waterproof, rubbery coating, the Leupold Rogue is the largest and heaviest of the models tested. It weighs 12.7 ounces and measures 4.6 inches in length. Although I did not perform shock tests, it is very likely the most durable of the three. To my eyes, the image seen appeared to have a slightly softer appearance. However, the Rogue is easy to focus as a result of having a comfortable knob that requires substantial turning to focus. Some compact binoculars are designed so that when the focusing knob is turned very little, the focus changes greatly. The image seen appears to be slightly softer and have less contrast than either the Olympus or Nikon.

### NIKON TRAVELITE VI

The Nikon Travelite VI is the latest incarnation of the series that has gone from Travelite to the VI version. Although it measures 4.5 inches in length, it weighs only 9.4 ounces, the lightest of three models tested. The image seen through the Nikon has a bright, crisp appearance with pleasing contrast. In terms of center sharpness, the Nikon appears to have an edge over the Olympus and Leupold.

### OLYMPUS TRACKER PC I

Long known for excellence in small optical devices, the Olympus Tracker PC I continues that tradition. As a result, it is a small binocular that measures only 3.8 inches in length and weighs 9.9 ounces. The Tracker appears to have a very bright view that snaps into focus easily. It focuses as close as 8.2 feet making it suitable for close viewing of small birds and animals.





Although no longer made, the Nikon Travelite II is often available as a used item. It performs about as well as any of the newer models.

## SUMMARY

None of the binoculars show any detectable barrel or pincushion distortion. To my eyes, it appeared the Nikon and Olympus models gave a slightly brighter image than the Leupold, even though all of the models have the same value for the relative brightness. This may be caused by different coatings used on the lenses or prisms. However, when testing edge sharpness, it appeared the Leupold was slightly sharper at the edge than either the Nikon or Olympus. Moreover, with both the Nikon and Olympus, the image at the inside edge of the field appeared sharper than at the outside edge. When looking at a bucket at a construction site, all three made it possible to read the label on the bucket when it was in the center of the field. Except for critical viewing, edge sharpness is not much of an issue because the viewer naturally places the object of interest in the center of the field.

I have used an old Nikon Travelite II for many years so I expected the VI version to be good, and it is. However, the optical performance of all three of the binoculars exceeded my expectations. They are high quality products from three major manufacturers and any of them would be excellent for general use. Having said that, I must say it is the Olympus Tracker PC I that is in my camera bag most of the time. **ASG**

**About the Author:** After a 32-year career as a chemistry professor at Illinois State University, Jim House has written extensively about shooting sports, which has resulted in the books *American Air Rifles*, *CO<sub>2</sub> Pistols and Rifles*, *The Gun Digest Book of 22 Rimfire and*, with his wife Kathleen, *Customize the Ruger 10/22*. Jim is the *Reloading Editor for Gun World* and a *Contributing Editor for other magazines*.

## SOURCES

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**Nikon, Inc.:** [nikonusa.com](http://nikonusa.com)

**Olympus America Inc.:** [olympusamerica.com](http://olympusamerica.com)

# BINOCULARS SIDE-BY-SIDE

	Olympus Tracker PC I	Leupold Rogue	Nikon Travelite VI
Durability	Rubberized	Plastic housing	Plastic housing
Water Proof	Yes	Plastic housing	Plastic housing
Focusing	Slow, precise	Fast	Fast
Pleasing view	Sharpest edge	Best overall	Good
Weight, oz.	Heaviest, 12.4	Lightest, 9.4	Light, 9.9
Size	Largest	Medium	Compact
Glasses provision	Twist up cups	Flexible cups	Twist up cups
Price	\$84.95	\$79.95	\$59.99

## Binoculars 101: What You Need To Know

Binoculars are characterized by two numbers. For example, a 7X50 binocular has a magnification of seven and 50mm objective lenses. A 6X30 model magnifies the image by six and has 30mm objective lenses. Another important parameter describing a binocular is known as the exit pupil, which determines the apparent brightness of the image. The exit pupil is essentially the diameter of the light path coming through the binocular to the eye.

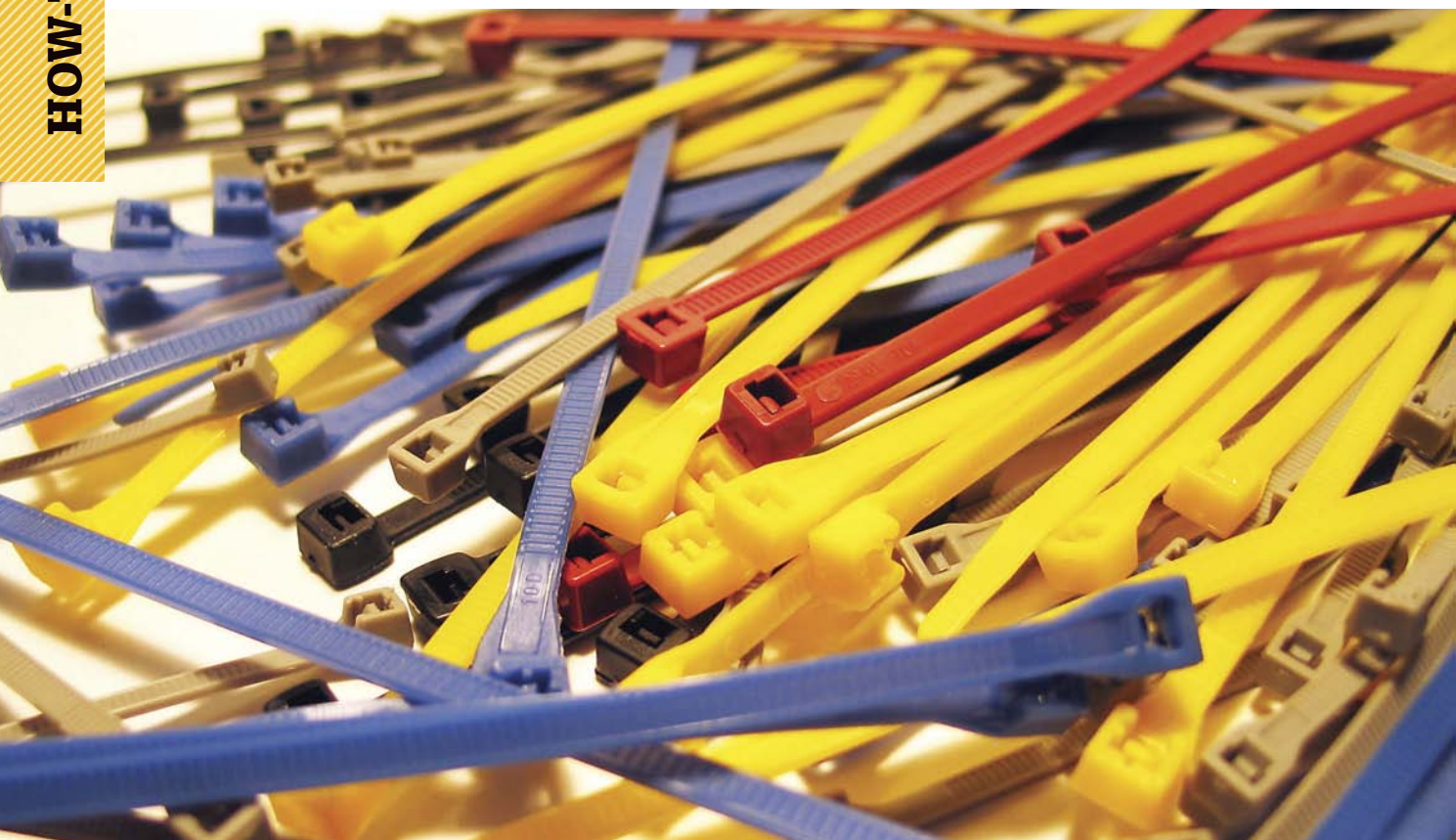
The size of the exit pupil is found by dividing the diameter of the objective lens by the magnification, and relative brightness is the square of the exit pupil size. For example, a 7X35 binocular has an exit pupil of 35 divided by 7, which means the exit pupil is 5mm in diameter and the relative brightness is 25. This is the same as in the case of a 6X30 binocular because 30mm divided by 6 is also 5mm and the

relative brightness is 25. For a 7X50 binocular, the exit pupil is 50 divided by 7, which is approximately 7.1mm corresponding to a relative brightness of 50, indicating a very bright view. In fact, the brightness of a 7X50 binocular is twice that of a 7X35 model. That is one reason why many military binoculars have been 7X50 models. The field of view is the width of the area seen at 1,000 yards and usually about 350 to 400 feet.

Much has changed over the years with all types of optical devices. The light entering the objective lenses is directed to the eyepieces by reflection from the surfaces of coated prisms. The lenses themselves, as well as the prisms have coatings that maximize the amount of reflected light with the result that some modern compact binoculars having designations such as 8X25 give a very bright view even though the exit pupil is only 3.125 mm and the relative brightness is 9.8. Moreover, some models weigh only about half a pound.

The Nikon 7X50 (on the left) from half a century ago is still an outstanding optic, but it would not be a good choice for inclusion in a portable kit. The modern Nikon Travelite VI is a better choice when portability is an issue.





# ZipIt

FROM MAKING A DIY  
SPEAR TO CRAMPONS,  
DON'T LEAVE HOME  
WITHOUT ZIP-TIES

Story and Photography by **Ryan Lee Price**

**T**o a survivor or a prepper, any simple piece of gear that has countless uses is an important piece of gear to have, and nothing in your pack/kit has more uses than zip-ties.

They're strong, reliable, and rarely ever break. Once in place, they stay there until you have to cut them off.

There are a few different kind of zip-ties with many specialized uses. Some deal with extreme temperatures while others provide the ability to hold heavy loads very securely. They come in a wide variety of sizes, lengths, and widths for a host of applications. Though they are made from a variety of materials, the most widely used zip-ties are made of general purpose polyamide nylon, are flame resistant, and some are even provide protection from the sun.





## What Can You Do with Them?

Frankly, the possibilities are endless, as zip-ties can be made to do a host of things, from the ordinary like lashing a bundle of sticks together to the extraordinary, like using it as a tourniquet (but only as a last ditch effort). There are many, many other things zip-ties can do to change your survival experience, and here are just a few:

**Quick Crampons:** If you find yourself on an icy trail or the sidewalk is icy, attach two or three cable ties around each of the bottoms of your boots. They will provide extra gripping power like ice cleats.

**DIY Spear:** Use zip-ties to lash a knife to the end of a stout sapling for a makeshift spear. Use heavy-duty ties for this because they will need to be tight, especially when under force. Use the pliers on your multi-tool to pull the cables tight.

**Hand Restraints:** In certain situations, you may need to restrain individuals and zip-ties are ideal for this. There are dozens of websites showing how easy it is to break out of zip-ties, so make sure to use the strong ones.

**Pants Belt:** Perhaps you needed your belt for something but your pants are falling down. Slip a zip-tie through a belt loop and then secure to another loop a few loops away and draw tight to keep your pants up.

**Trail Marker:** Simply zip a brightly colored tie on a branch or bush and the trail will be easily recognizable.



**Makeshift Shelter:** Use a zip-tie to lash tarps or ponchos together to make a shelter. They can also be used to lash saplings together in a variety of ways to form a shelter's inner structure.

**Splints Support:** Use zip-ties to lash splints to a broken arm or a sprained ankle. Leave the zip-tie relatively loose for the first couple of hours to allow for the swelling of the limb.

## The Invention Of Zip-Ties

Originally known as cable ties, they were invented by Maurus C. Logan after touring a Boeing aircraft manufacturing facility in 1956 and observed workers cutting their fingers on the cumbersome wax-coated braided nylon cord used to tie together bundles of aircraft wiring. He felt there should be a better way, and on June 24, 1958, he submitted a patent for the Ty-Rap cable tie. They were originally designed with a metal clasp tooth but Logan's company, Thomas & Betts, later switched to a nylon/plastic design that is used today. As the ties gained in popularity, the name cable tie fell from use in favor of zip-ties, describing the ratcheting sound of them tightening.

## Types of Zip-Ties

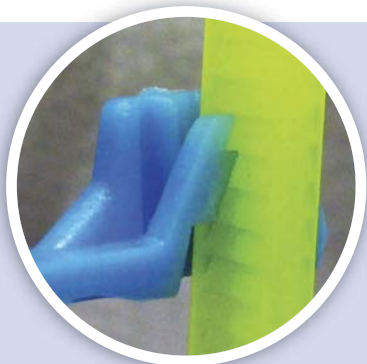
**Nylon:** These are the most commonly found material zip-ties are made from. Depending on the type of tie you need, their normal operating temperature range is -40 to 185 degrees F. They come in many different colors, sizes, lengths, and tensile strengths. The nylon zip-ties are miniature, standard, intermediate, heavy duty, and extra heavy duty, named so because of their size as well as the tensile strength.

**Stainless Steel:** Stainless Steel ties are used when liquid and/or extreme temperatures are involved. These ties can withstand temperatures ranging from -100 to 1000 degrees F. The stainless steel ties have a tensile strength of about 100 lbs.

**Halar:** Also known as plenum ties, these are the most durable and are used in nuclear plants, chemical environments, telecommunications equipment, aerospace, and high and low temperature environments. They are resistant to fire, radiation, and emit a very low quantity of smoke if burned. They have a maximum continuous operating temperature of 302 degrees F.

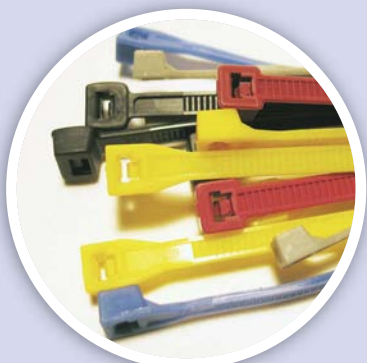
**Tefzel:** These have a distinctive aqua color. Tefzel cable ties are mainly used in applications that require resistance to environmental hazards such as chemical attacks, gamma and ultraviolet radiation, and extreme temperatures up to 300 degrees F. These cable ties are fire and acid resistant as well.

**Metal Detectable:** These are primarily used in the food preparation, pharmaceutical, or beverage industries because they show up on x-ray machines and metal detectors. They can also be found with a magnet because the ties are made with metal mixed in with the polymers. These cable ties have a distinct teal color which allows them to be easily found as well. These cable ties have a maximum operating temperature of 239 degrees F.



## How Zip-Ties Work?

Zip ties are long strands of plastic with ridged edges in a row along the entire length. The end of the zip tie is a box or case with a latch that catches on these ridges. When you slide the end of the tie through the box it goes in easily, but the direction of the latch prevents the tie from coming back out by grabbing on to the ridges. A kidnaper may think you are secure with a zip tie around your wrists, but there are a number of different methods you can use to get free.



## Which Zip-Ties to Buy?

Which type of zip ties should you buy? You ultimately want a variety of sizes and widths available to handle different jobs and you want to make sure you carry with you a variety of lengths and widths. The color is also important due to how the plastic reacts to the sun. Long exposure to the sun will make the average zip tie lose strength and will cause them to eventually break. Typically, the black ones are specially coated and better protected from the sun.



Shoe Laces



Color Coordinated



Quick Lock

**Shoe Laces:** Emergency shoe laces if you had to use your laces for cordage. Slip a small tie through several of your boot eyelets and secure.

**Pack Stash:** With zip-ties, you can easily lash a variety of items to your pack, an ATV, a horse, and even the sides of your bug-out vehicle.

**Color Coordinated:** Use different color zip-ties to mark different pack pockets or compartments to help you remember what is in them. Blue is water (purification tablets, filters); red is fire (ferro rods, matches, tinder); and yellow is signaling devices (mirror, whistle).

**Quick Lock:** Use a series of zip-ties as an inexpensive and quick lock when you need to secure bug-out bags, gear, and compartments on a tool box. Because the only way to remove a zip tie is to cut it, it will make stealing your gear slightly more difficult.



Hangers



Tight Roll

**Hangers:** Easily secure lanterns and other gear overhead by looping a zip-tie around a limb or tent pole. You can also secure food bags up high to keep animals out of your supplies.

**Easy Pull:** Slip a small zip-tie through a zipper's loop to make the hard-to-grab zipper pulls easier to manipulate.

**Tight Roll:** Use one or more zip-ties in a chain to keep items, like a bedroll or a jacket tightly packed so they use up less space.

**Animal Traps:** With a little creativity, a zip-tie can be made into an animal snare. As the animal goes through a loose loop, it will tighten around him as it pulls.

**Rip Stop:** A large tear in a tent or backpack can mean your gear will spill out. Very small zip-ties can act as an emergency sewing kit by temporarily shoring up the hole. **ASG**



## The image displays two magazine covers and a prominent red circular price tag. The left magazine, 'Knives', features a large folding knife on its cover. Text on the cover includes 'Blade Show: Top New Knives', 'DEMAND The BEST', 'HUNTING BLADES At EVERY PRICE', 'Perfect ACCESSORIES For Every Knife', 'POWER CHOPPER Mora's Bigger, Better BUSHCRAFTER', 'SECRETS To SUCCESS Making A Business Of Making Knives', and 'Essential Tools'. The right magazine, 'SURVIVAL GUIDE', shows three people and a dog in outdoor gear. Text on the cover includes 'THE RIGHT GEAR FOR EVERY TERRAIN', '5 WAYS TO BUILD SURVIVAL ENDURANCE', 'ONE GUN DO-EVERYTHING FIREARM FOR DISASTERS', 'HOW-TO PICK A PADLOCK WRAP A PARACORD BRACELET AND MORE', and 'PACK MENTALITY WHY ORGANIZED GROUPS SURVIVE'. A large red circular sticker with a white dashed border is placed over the top center of the magazines, containing the text 'ONLY \$39.95'.

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# TAKEN

## HOW TO SURVIVE A KIDNAPPING OR HOSTAGE SITUATION

Story By **Scott Fisher** | Illustrations by Tris Mast

**A**bduction and detainment by criminals or terrorists is a dangerous, terrifying ordeal, one for which it's difficult to prepare by any normal standards. You won't be able to access your survival kit if you're being held at gunpoint, whether during a robbery or by political extremists. All you'll have available are your wits, your powers of observation, and some foreknowledge. Fortunately, all that — plus a little luck — might be enough to help tilt the odds in your favor.

### FIRST: KEEP CALM AND CARRY ON

The initial moments of a kidnapping or hostage-taking are the most dangerous: you have no idea of the motives of the kidnapers, and they have no sense of what you or your fellow hostages-to-be are capable of. Panic responses, unpredictable actions, and wild outbursts draw attention to yourself, and can make you a target — literally.

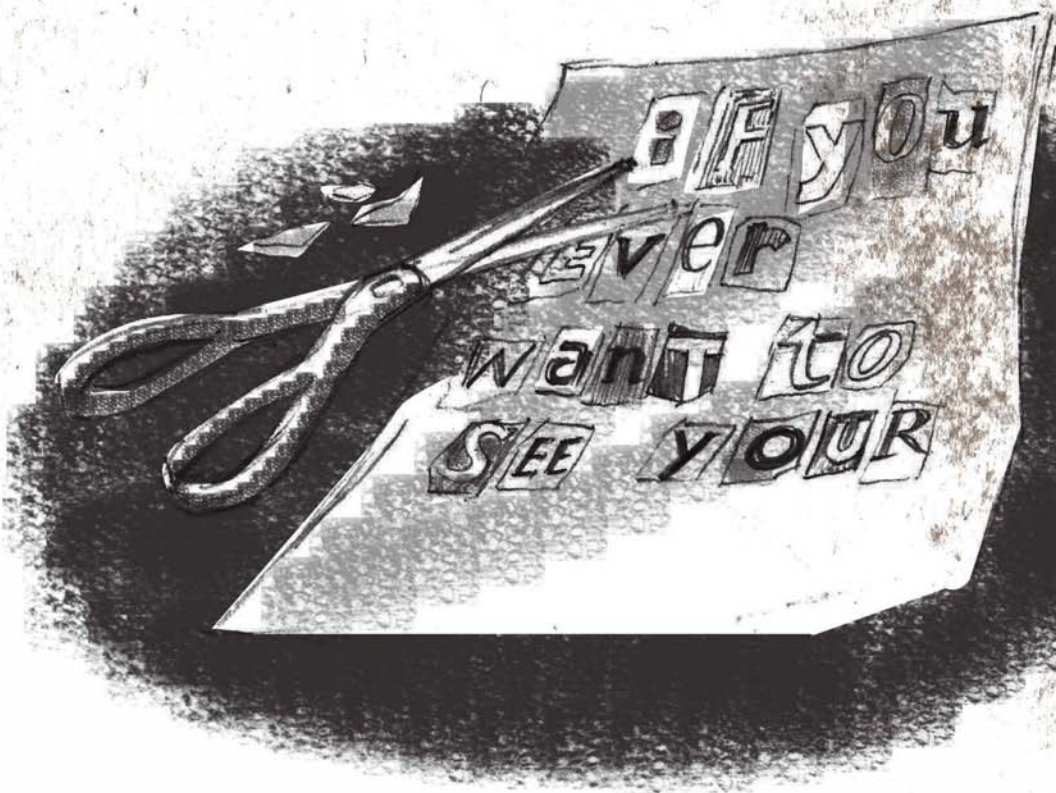
"Right from the start," says Brian John Heard in his book *Kidnapped and Abduction: Minimizing the Threat and Lessons in Survival*, "be observant. Remember every single detail that you can; this will not only assist in your escape, should you so try, but also supply information to the police that will aid in apprehending and convicting the kidnapers."

### DON'T GET TUNNEL VISION

Stay aware of your situation and of your captors' emotional state, and monitor their intentions.

Remember and use the three stages of situational awareness: Perception — observe everything that is happening; Comprehension — process and understand the risks and dangers, both immediate and future; and Projection — looking ahead to the possible outcomes of the situation, and looking for opportunities for defensive actions that may become available.





Make a note of how many attackers there are, how they are armed, and other details — the language they speak, their claimed or apparent motives and demands, and if possible, the details of where they are taking you. If you are blindfolded and put in a car, some experts recommend keeping track of the turns (right and left), and by counting the time between them, just to get a rough idea of where you might be taken.

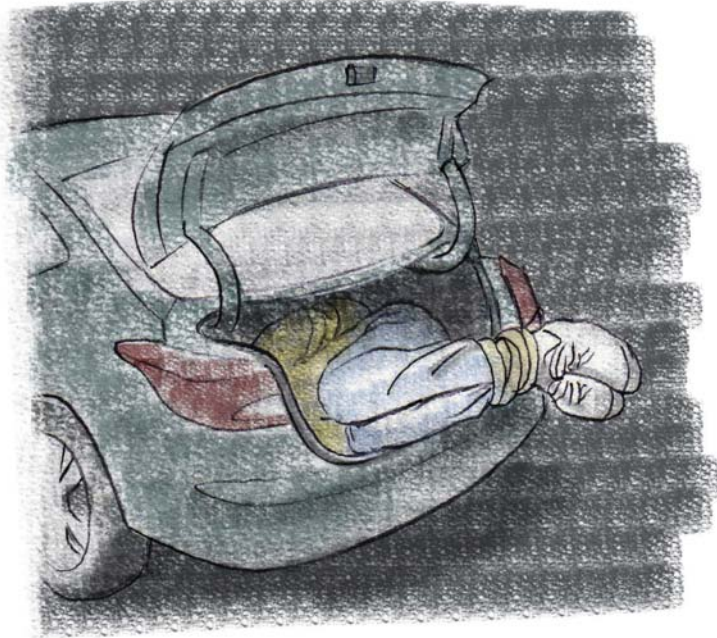
### MANAGE AND MONITOR TIME

If anyone has a watch, that's the simplest way to keep track of the passage of hours and days. If not, try to track hours of daylight, or at least sense the change in temperature signifying day and night. Look for patterns in your captors' behavior: What times they bring you food, who brings it, anything else they repeat. Observing scheduled activities can give you a potential edge in an escape attempt: a repeated activity at a known time means you can expect what is going to hap-

pen and can help you plan in advance to take intelligent action.

Famed racing driver Stirling Moss, highly successful in the very dangerous years of the 1950s and '60s, said one of the things he feared the most during a race was to come suddenly on an oil slick. It's like hitting a patch of ice; the car becomes a projectile incapable of braking, steering, or accelerating. His survival technique? Moss would deliberately throw his car into a slide before he got to the slick. The car was still out of control, but as a result of his own actions, which made it less frightening. In the same way, tracking time, schedules, and activity reduces the passive nature of your captivity.

"Hostages should perform mental exercises every day to keep their minds sharp and help regain and retain perspective," says Richard P. Wright, author of *Kidnap for Ransom: Resolving the Unthinkable*. "Simple exercises such as multiplication tables, remembering quotations from great literary works, or



reconstructing dialogues with loved ones can be of great help in maintaining mental acuity.”

## KEEP AWARE OF THE END GAME

How is the situation likely to end, that is, what are your captors’ reasons for taking you hostage? If it’s for ransom, you’re only worth money to them if you’re alive. The consensus from law enforcement and other agencies is to cooperate, as far as possible: don’t give them a reason to harm you, and wait for the ordeal to be over. Similarly, if you are hostages during a criminal activity, your survival is their survival. If they kill you, there’s nothing to prevent a SWAT team from rushing in and killing them.

If you are hostages of a political extremist group, things get more complicated. In some cases, such as the Iranian hostage situation of 1979-81, the 52 Americans seized by revolutionaries were more valuable alive than dead. Today, of course, the gruesome murder of political hostages is another method of terror.

Assess your situation for how likely it is your captors might kill you, no matter what you do. This is distinct from threats if you don’t comply with their orders. It’s important you use the third step in the situational awareness assessment methodology: projection. Once you have observed and understood the situation, project the outcomes based on what you know about your captors and their motives. If you believe, genuinely believe, that they intend to kill you no matter what their demands are, then you stand to lose nothing by making every attempt to escape.

“ASSESS YOUR  
SITUATION FOR  
HOW LIKELY IT IS  
THAT YOUR  
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MATTER WHAT  
YOU DO.”

The behavior of your captors toward you may give you some indication as to this possibility. If they stop feeding you, if their treatment of you becomes dehumanizing, or if they no longer conceal their identities around you, this may be an indication the situation is winding down. Be prepared to do anything you have to escape, if you genuinely believe they intend the worst.

## KEEP PHYSICALLY ACTIVE

Whether to prepare for an escape or simply to pass through the situation with the least amount of stress and terror, keeping physically active is crucial. Make a point to do any exercises you can perform in the space available. Include cardiovascular (endurance) training and strength training in your routine, jumping jacks and pushups, isometrics (squeezing your hands together, pulling them apart), whatever you can do. Exercise helps in two ways: first, physical exertion helps combat depression, and by keeping yourself active you will be more alert to your situation. Second, of course, if you see an opening where you can make a run for it, being in shape could give you the edge that might save your life.

## DON'T STAND OUT

As far as possible, do nothing to attract your captor’s awareness. If you have fellow captives, blend in with them. Don’t do anything to make them select you for an example. (Our “Gray Man” article from the January 2015 issue covers this in more detail.) In particular, do nothing to give the appearance of being a troublemaker. If the opportunity does come for you to escape, you’ll have a greater chance of success if they haven’t been keeping an extra-watchful eye on you.

If they interrogate you, don’t be belligerent or combative (no matter how cool it looks in the movies when the spy gives a witty comeback to the super-villain). Being argumentative can lead to longer incarceration or reprisals. Talk freely of inconsequential things, but be more cautious on issues such as their motives (political, criminal, or both). And beware the “good cop/bad cop” routine — criminals and terrorists use it, too.

## DON'T BE A VICTIM OF THE RESCUE

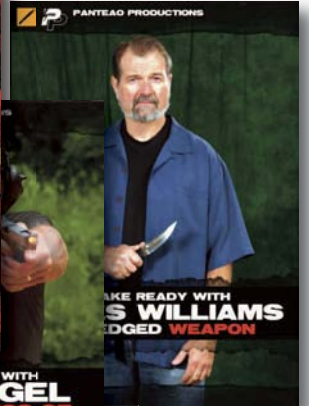
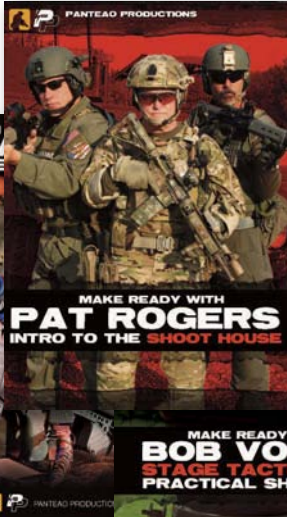
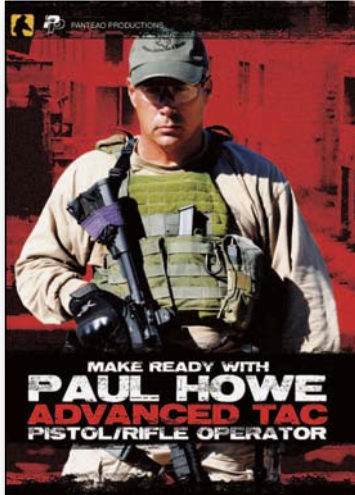
The most dangerous times of your captivity are when you are initially captured, but also when rescuers arrive.





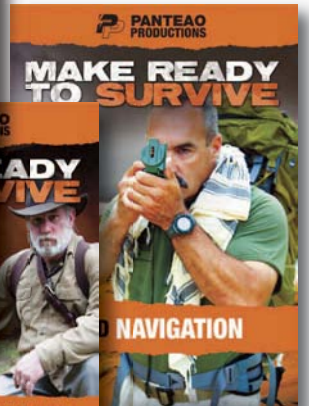
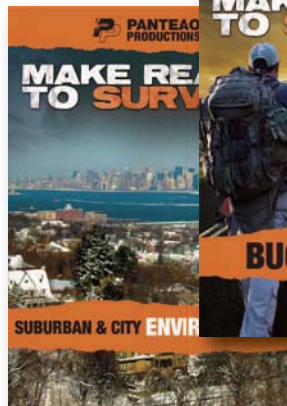
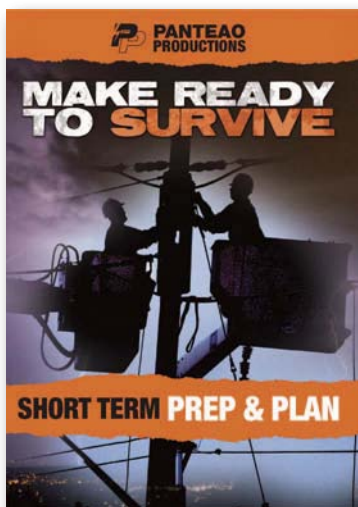
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## Iran Hostage Crisis (1979-81)

On Nov. 4th, 1979, a mob of between 300 and 500 student revolutionaries stormed the U.S. Embassy in Tehran, Iran and took 66 U.S. citizens and diplomats hostage. After releasing a number of women and African-American hostages, 51 people remained captives.

On Feb. 5, 1980, guards wearing black ski masks woke the hostages in the middle of the night, blindfolded them and led them to another part of the embassy. There, they were forced to strip and kneel while the guards stood behind them, making a show of cocking their weapons and preparing to fire. After several terrifying moments, the guards laughed, unloaded their weapons and told the hostages to get dressed. Both before and after, the hostages were repeatedly threatened with trial and execution, and were forced to play "Russian roulette" by the guards. Four hostages attempted escape, and spent long periods in solitary confinement after being recaptured.

In April 1980, President Jimmy Carter proposed the ultra-secret operation "Eagle Claw" to rescue the hostages in the former embassy building. Questionable planning, unmanageable logistics, and a sudden dust storm in the middle of the night led to the scrubbing of the mission, after the storm caused one of the rescue helicopters to crash into one of the twin C-130 cargo planes assigned to the mission, killing eight people. Secretary of State Cyrus Vance, who had objected to the plan from the beginning, resigned in protest as the Iranian government publicized the mission's failure.

In July 1980, the former Shah died, removing a key element of the Iranian demands. Combined with the Iraq-Iran war which began the following September, the Iranian government expressed a renewed interest in ending the hostage situation. Carter's administration redoubled negotiations to release the hostages the following month; this last-ditch effort in the final weeks before the presidential election gave rise to the term "October surprise," a phrase invented by Ronald Reagan's campaign team.

November 4th, 1980 was election day in the U.S., as well as the one-year anniversary of the original kidnapping. Carter's

defeat to Reagan is credited in part to his inability to bring the hostages home. On January 20, 1981, after 444 days of captivity, the American hostages were released.

## Norrmlmstorg Bank Robbery (1973)

Any time a hostage situation comes up in conversation, it seems someone mentions "Stockholm Syndrome," when hostages begin to identify with and even sympathize with their captors. It refers to an actual event, a 1973 bank robbery in the Norrmalmstorg square in Stockholm, Sweden. On August 23 of that year, Jan-Erik Olsson, a repeat offender on furlough from his most recent prison term, entered the Kreditbanken in Norrmalmstorg and attempted to rob the bank. Police were summoned immediately and a brief fire-fight ensued, in which one officer was injured and the other tied to a chair, and Olsson took four bank employees hostage. He demanded three million Swedish kronor, along with guns, bulletproof vests, and "a fast car" in exchange for the hostages. He also asked that his friend Clark Olofsson, also a career criminal, be brought to him.

For the next six days, negotiations and rescue activity continued in parallel. Olsson called the Swedish prime minister, Olof Palme, saying he would kill the hostages; he put one in a chokehold and let the strangled cries over the phone speak to his intentions.

The next day, Palme received another call — this time from hostage Kristin Emmark, a bank employee who said she was displeased with Palme's actions and asked him to let the robbers go.

Olsson threatened repeatedly to kill all the hostages if the police used gas, but on Aug. 28 the police launched a gas attack and after half an hour, Olsson and Olofsson surrendered without further harm to the hostages.

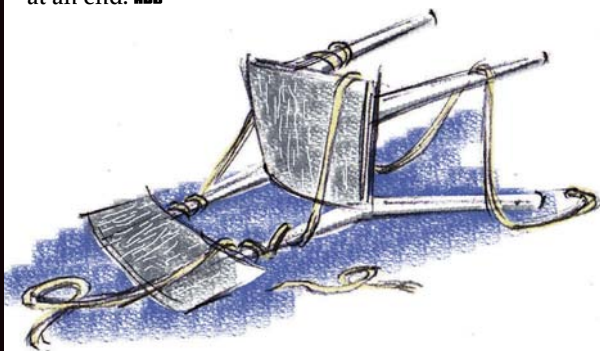
One myth about the Norrmalmstorg hostage situation is that one of the hostages (presumably Emmark) became engaged to one of the kidnappers; this appears to be a mistranslation of the Swedish word "engagera," which means to take an interest in someone — not that there was a proposal of marriage.

"THE MOST DANGEROUS TIMES OF YOUR CAPTIVITY ARE WHEN YOU ARE INITIALLY CAPTURED, BUT ALSO WHEN RESCUERS ARRIVE. YOU'VE SURVIVED THE HOSTAGE SITUATION; BE SURE YOU ALSO SURVIVE THE RESCUE."

According to Brian John Heard in his book *Kidnapped and Abduction: Minimizing the Threat and Lessons in Survival*: "Although it may be of little comfort when you are under the extreme duress of being held as a hostage, you must never forget that you are of value to your abductors only if you are alive. That they will want to keep it that way is beyond doubt. Experience has likewise shown that the longer you are held in captivity, no matter how onerous it may be, the better the chances that you will be released alive."

Drop to the floor, stay under cover if available, and keep track as far as you can where the fire is coming from. In addition, your captors may, seeing a desperate situation, decide to use you as a shield or simply kill you and your fellow victims. You survived the hostage situation; be sure you also survive the rescue.

Furthermore, don't be offended if your rescuers don't immediately recognize you as a hostage. (Sure, they do in the movies, but in the movies, the rescuers have read the script.) Remember that they are just as bent on their own self-preservation as you are, only they have automatic weapons. If they insist on detaining, searching, and even handcuffing you, simply keep repeating (in their language, if you speak it) that you are one of the hostages and thank them for rescuing you. Eventually your identity will become known, and your nightmare will be at an end. **ASB**





# Shelter

One of the basic elements of survival is a shelter that will adequately and temporarily shield you from the elements, be it the blistering sun during the summer or the frigid temperatures in winter. Wind, rain, snow, ice, and heat can sap energy and sometimes make survival nearly impossible.

▶ When choosing a camp site make sure you look for the Four Ws: wood, water, wind, and widow makers. Wood for campfires and shelter; water for drinking, sanitation, cooking; wind direction and speed; and widow makers, overhead dead branches or trees.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ Always bring some sort of cover/shelter with you while trekking, hiking, or include one in your survival kit. A natural shelter to block wind, snow, or rain may not be available, while a simple 55-gallon, 3-mil drum liner will do a multitude of tasks, such as wind block, rain poncho, emergency bag, and even water collection and carrying device.

— JAMIE L. BURLEIGH, ONEFOOTINTOTHEWILD.COM

▶ In a survival scenario, natural resources should be gathered as they present themselves. Don't wait until you've selected a campsite to gather water and fire-making materials. Collect these resources as you find them, as they may be scarce along the trail ahead.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

▶ When applying roofing materials to a primitive shelter make sure you begin at the bottom and work your way to the top. This allows the water to shed freely off the roof of the shelter. Failure to do so could result in serious leaks in your roof.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

▶ In extreme rain environments you may want to build a shelter over outdoor fires. Do this by making a tripod and wrapping the top several feet with cordage before adding roofing materials such as cedar bows by weaving them through the cordage.

— CLINT JIVOIN, WILLOW HAVEN OUTDOOR

▶ Out of candles? A crayon will burn for up to 30 minutes and be enough to warm a small shelter.

— KEITH BRADFORD, LIFE HACKS

▶ During the aftermath of a nuclear or biological weapon attack, use a new vacuum with a CBRN filter as a simple air pump to keep fresh air circulating in your house or shelter.

— F.J. BOHAN, EMERGENCY AIR

▶ Since sleeping bags work by trapping dead air, fluff your bag before you get inside. To avoid inner-bag condensation, keep your mouth and nose uncovered by the bag.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ Position your shelter so it has a southern exposure (if you're north of the equator). This allows for optimal light and heat from the sun throughout the day. Face the door east so you get the best early morning sun.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ All shelters should have entrances placed at 90 degrees to the prevailing winds. This will maximize your protection from the wind and prevent smoke from your fire from curling back into the shelter.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

▶ If you are in a large party of people, it is best to build multiple smaller shelters for two or three people each. They are quicker to build and easier to heat.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

▶ If stranded in your car in a desert, staying in your car will expose you to higher temperatures than seeking shelter under the car. Lay under the trunk end and push up sand and dirt around the perimeter of the car. Sand six inches below the surface can be as much as 30 degrees cooler than the sun-heated sand above.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC



# The Can Cooker

## AN INDESTRUCTIBLE CAULDRON ABLE TO COOK ANYTHING

Story and Photography by **Paul Hantke**

**N**ot every survival situation has to be a life or death struggle. Sometimes, your skills can be used even during day-to-day activities. For example, we extended an open invitation to the whole family to join my wife Mary and I at our home for Thanksgiving, but everyone had plans and our guest list topped out at three – the two of us and one of our two daughters. Then one morning the phone started ringing with folks calling to say they had changed plans and were coming for the holiday, and other folks calling to say that if everybody else was going to be here they were too. In the space of a few hours our guest list swelled to 14 confirmed and a few “maybes.”

Just then, I received a press release from Karen Lutto at Hunter Outdoor Communications with the answer to it all: the Can Cooker. As the story goes, a guy named Seth McGinn had been making the cookers out of old stainless steel cream cans from a nearby dairy. The supply of cans ran out soon, but demand kept increasing, so the Can Cooker of today was born.

### HOW IT WORKS

This modern version is made of aluminum, which dramatically reduces the weight of the Can Cooker while offering outstanding heat transfer qualities. The can heats up and cools off more evenly and



**“THIS MODERN VERSION IS MADE OF ALUMINUM, WHICH DRAMATICALLY REDUCES THE WEIGHT OF THE CAN COOKER WHILE OFFERING THE OUTSTANDING HEAT TRANSFER QUALITIES OF THAT METAL.”**

quicker than the old, heavy stainless steel cookers, and the food grade aluminum is anodized inside and out – so the food never touches the raw aluminum and clean-up is easy.

This original Can Cooker holds four gallons and measures 15 inches tall including the handle on the lid, and the main body of the device is 10 inches in diameter overall, while the

sturdy handles extend that out to just about 14 inches. It weighs in at a svelte four pounds.

The Can Cooker necks down to 7.5 inches at the top, where the lid mates to a premium high-temperature silicone gasket to seal itself via two heavy-duty clamps. The lid is vented with a small hole to prevent blow-ups while still providing the pressure cooking action that makes the Cooker so efficient.

It comes with a generous selection of five different spices/flavorings, and a cloth carry/storage bag. There is a folding cutting board available in three sizes, and a two-piece stainless steel rack to keep food off the bottom of the can is also offered.



## USING THE CAN COOKER

Using the Can Cooker couldn't be easier. Like any cookware, just make sure it's clean with soap and water, give the inside a coating of your favorite non-stick spray, load it up, add at least 12 ounces of fluid (water, beer, wine, juice, marinades, etc.) and put it on the heat.

They recommend a low to medium heat to prevent the liquid from boiling off too quickly, and another good tip is to coat the bottom of the can with bar soap to make soot removal easy – especially if using BBQ charcoal or an open fire.

Cooking requires little to no skill... simply look for gentle steam coming from the vent hole. If you don't get steam in fifteen minutes increase the temperature slowly until it starts, if it steams too early turn it down. Cooking time is noted in each recipe, but generally meals will be done in 25 to 35 minutes.

The can, handles and lid latches will be hot, so use oven mitts to handle the cooker and place it on a safe surface for five to 10 minutes to let the pressure go down. There will still be steam in the can so carefully remove the lid, empty the contents into a large serving bowl and enjoy.

We have a five-burner stove top with a big, high-heat burner in the middle that would have been perfect if not for all the other Thanksgiving goodies that needed space, but no worries, as my BBQ grill has a side burner that was just the ticket.

It is my humble opinion you can't have too much mashed potatoes or dressing at Thanksgiving, so I loaded about 15 good-sized spuds in the Can Cooker, poured in a couple of bottles of beer, and lit the burner. Following the easy instructions I had all the potatoes ready for processing much quicker than if I had tried to boil them, and then it was on to the corn on the cob.



The generous bottles of spices/seasonings include: All-Purpose Seasoning, Butter Garlic Salt, Original Creole Seasoning, Onion Pepper Seasoning, and Original Seasoned Salt.

We shucked and halved 20 ears and this time I used water with a couple of tablespoons full of natural cane sugar. Having now had some experience with the potatoes I calculated the time back from when the turkey would be ready and carved to start this load and the corn was done perfectly and exactly on time.

## SURVIVING THANKSGIVING

When all was said and done it looked a pack of hungry wolves had been through the place, with just enough turkey left over from a 22 pound bird for a few sandwiches. It doesn't matter if this is your first meal on your first day of being lost in the wilderness or an emergency Thanksgiving dinner thrown together at the last minute, the proper gear is important. It could save your life, but in this case, it just saved a family's Thanksgiving... and sanity. **ASG**

Have you used the Can Cooker? Tell us what you think about it. Share your pictures and recipes with us on Instagram at [#americansurvivalguide](#) and on Facebook at [facebook.com/americansurvivalguidemagazine](#)

**About the Author:** Paul Hantke has been a self-reliant outdoorsman all his life. His father set the mold with camping trips that were then reinforced by many years in the Cub Scouts, Boy Scouts, and Explorers. Hantke served in the USMC/R from 1968 to 1974, including a one-year "camping trip" to Vietnam, where he spent all his time at primitive forward outposts or completely in the bush. His work has been published in virtually every *Outdoors/Firearms* journal since 1986, and he was a Staff Editor for the original *American Survival Guide* magazine from 1997 to 2000.

## SOURCE

[cancooker.com](#) | MSRP: \$89.99

## Glazed Wild Duck

8 boneless skinless wild duck breast  
1 cup Iron Chef Orange Ginger Glaze Sauce  
6 oz of chicken stock  
6 oz of water

1 tablespoon of Kosher salt mixed in a bowl of water deep enough to cover all duck breast. Refrigerate for 2 hours. Dry the breast and use fresh coffee grinds to dry rub on each breast. Refrigerate for 2 hours. Take out and rinse off coffee grinds, dry with some paper towel and brush the Orange Glaze Sauce on each breast.

Spray non-stick cooking spray in CanCooker and on racks, pour in the 6 ounces of chicken stock and 6 ounces of water. Put the glazed duck breasts on racks. Put the CanCooker lid on and latch. Use a medium low heat for cooking and once it starts steaming, cook for 5 to 6 minutes depending on preferred rareness. Take cooker off heat source and let sit for a couple minutes. Remove duck breast, put on a platter and brush on more of the Orange Ginger Glaze and serve with wild rice and vegetables.

## Beef Stew

2 lbs of beef cut into 1-inch pieces  
1 lb of potatoes into 1-inch pieces  
6 oz of Portobello mushrooms caps cut into 1-inch pieces  
2 medium onions cut into wedges  
2 cups of fresh baby carrots  
1 (14-oz) can of beef broth  
1 (14-oz) can of diced tomatoes with Italian herbs  
1 cup of Burgundy or Pinot Noir wine  
½ teaspoon pepper



Spray non-stick cooking spray in cooker, place beef pieces in bottom of cooker, add the remainder of the ingredients. Cover with lid and bring up to mild steam. Cook on med-low for 45 minutes. Remove lid, and allow the heat to come out for a minute then carefully stir in a mixture of 3 tablespoons of water and ¼ cup of all-purpose flour to thicken the stew to desire consistency. Remove from heat and serve!



# Ammo Storage

## KEEPING YOUR AMMO HEALTHY AND WELL

Story and Photography by **Thomas Tabor**

**W**hether you are a shooter that likes to stockpile ammunition in the event of some unforeseen national upheaval or simply prefer to keep some extra cartridges lying around for hunting purposes, it is in your best interest to take reasonable care of that ammunition or you could be setting the scene for problems down the road. In the best circumstances, mishandling your ammunition could result in poor accuracy, bad shooting performance and missed opportunities. But, even worse, those same lackadaisical attitudes and practices can in some cases lead to personal injuries or damage to your firearms.

We've come a long way from the black powder days when a stray spark could turn into a devastating explosion. Generally, the smokeless powders of today only become explosive when the gases emitted in the ignition process



are confined and unable to vent. Though I wouldn't recommend doing so, if you touched a lit match to a small pile of smokeless powder it would typically result in an intense and violent burn, with the blaze reaching skyward some distance. Generally, the powder would just flame out because of the outside air. Just because a wayward spark is not as much of a concern these days doesn't mean there aren't other issues to consider with ammo storage.

## ATTRITION THREATS TO YOUR AMMO

In some instances rough handling of ammunition can have consequences associated with it. No, I'm not talking about a cartridge accidentally going off, but you should be concerned about what that same rough treatment may be doing to the powder inside those cartridges. A major factor affecting the burn rate of smokeless powder has to do with shape and consistency of the powder kernels. For that reason powder manufacturers go to great lengths to keep tolerances within those powder kernels to an absolute minimum. But over time that level of consistency can be degraded through attrition inside the cartridges. Abusive handling, shaking and other rough treatment of the cartridges can eventually result in changes taking place to the shape of the powder kernels. And if you are one of those people that likes throwing an extra box of cartridges behind the seat of your vehicle, or in the glove box, and then go off-roading, this could easily result in problems for you later on.

## TEMPERATURE VARIATIONS

Aside from the problems associated with the potential changes to the physical shape of the powder kernels, sometimes chemical changes can occur to the powder that also will have a bearing on cartridge performance. Today's smokeless powder is made up of essentially two component parts: nitroglycerin and some form of cellulose substance, such as cotton or wood fiber. Like the size and shape of the powder kernels, the combination and consistency of those component parts also can affect the burning rate of the powder.

A few years ago, a major U.S. powder manufacturer conducted a series of tests that explored how modern smokeless powder could be adversely affected when exposed to high temperatures. The researchers wanted to know if there could be a potential problem for our military troops serving in arid and hot combat zones. Through a series of extensive tests the



**[FROM TOP LEFT]** There is no way to know what conditions old ammunition has been subjected to. For this reason this type of ammunition is best left in the hands of a collector with no intention of ever firing it. ● Bullet point damage can occur in many different ways. Damage like this will result in reducing the ballistic coefficient value of the bullet and may affect the shooting accuracy of the cartridges. ● Storing and transporting ammunition on the dashboard of a vehicle isn't really a smart idea. Doing so has the potential to expose your cartridges to elevated temperature levels and the jarring could cause attrition to the powder kernels. ● Bullet point damage commonly occurs inside box style magazines in heavy recoiling rifles. In this case the points of the bullets are driven into the front of the magazine housing resulting in the deformation of the points. **[OPPOSITE]** MTM Case-Gard's new Ammo Crate Utility Boxes are available in a couple of different sizes and are great for storage of larger quantities of ammunition or other items.



The new Fresh Fire Pack ammunition is a great choice when it comes to long term cartridge storage.

researchers found that when some ammunition was exposed to temperatures in excess of 125 degrees F very spooky things sometimes would occur. Under those conditions they found that sometimes it would result in the powder kernels beginning to “sweat” or “out-gas.” In other words, the increase in temperature would cause the nitro component in the powder to transform into a gaseous state then attempt to exit the cellulose material. It seemed the higher the temperature the more out-gassing generally occurred. Chemical changes like these can affect the level of chamber pressure generated when the ammunition is fired. But that isn’t where the story ends, nor is it necessarily the scariest part of this scenario.

After those cartridges had been exposed to the high temperatures, then allowed to return to more normal conditions, the powder did not always return to its original state. In this case sometimes the gasified nitro was unable to completely and uniformly reenter the powder

kernels and that lack of consistency resulted in variations in the chamber pressure when those cartridges were fired. At times some of those cartridges produced dangerously high pressure levels while others seemed to perform more normally. It’s not exactly clear why these variations sometimes occurred, but possibly some of the cartridges may have been sheltered slightly more than others from the effects of the heat, or maybe it was the result of some other type of anomaly. But, why this happens isn’t as relevant as the unpredictability that may occur when these cartridges are shot. Depending on the type of powder used, and how susceptible it is to the effects of the high temperature, at best a shooter could possibly expect a difference in point of the bullet impact. At worst, the shooter could be subjecting his or her firearm to elevated and dangerously high levels of chamber pressures.

At first you might think your ammo would never be exposed to temperatures in excess of 125 degrees, but temperatures like this are much more common than you might think. Vehicle interiors often heat up above 125 degrees when parked in the sun with the windows rolled up. Think about it - if you keep a box of ammo on the dash of your vehicle for extended periods you may be setting up the perfect environment for this problem to occur.

Recently, some powder manufacturers have taken notice of this problem and came out with new strains of powders that are said to be less susceptible to temperature extremes. One such manufacturer is Hodgdon Powders, which has developed an extensive line of what are termed “Extreme Powders”. If you handload your own cartridges you may be able to immediately take advantage of the benefits associated with these new powders. On the other hand, if you pur-

The Champion Fresh Fire Packs come with 325 .22 LR cartridges sealed in a vacuum packed metal can which had the air extracted and replaced with nitrogen to form a moisture-free storage environment.





chase factory-loaded ammunition it may take some time before these powders become commonplace in the over-the-counter ammunition.

### LONG-TERM AMMO STORAGE

In recent years there has been a shortage of ammunition available on the open market. I personally believe this shortage is a direct result of shooters purchasing more ammunition than they ever did before. In my opinion, uncertainty in our country's direction and the fear of losing our personal freedom of legal gun ownership has resulted in many citizens stockpiling ammunition. But no matter what the cause of the shortage is, if you are contemplating long term or even short term storage of ammunition it is in your interest to take certain precautions to help ensure good shooting performance when that firing pin makes contact with the cartridge primer. Essentially, there are two important factors to consider in extended ammunition storage. The first is moderation and consistency in the storage temperatures and second is dryness. There are a number of ways to ensure those conditions are adhered to. Both of these factors are a matter of environment and that can, in some instances, be controlled inside your home. But aside from that, there are some great new products available on the market that can help you in these endeavors.

Federal Ammunition recently anticipated the problems associated with long term storage of ammunition and are now offering both .22 LR and 5.56x45mm cartridges packed in cans called Fresh Fire Packs. The metal containers these cartridges come in remind me of the type of cans Vienna sausage and sardines frequently are packed in, including a pull-top lid. And, similar to how optic manufacturers withdraw the air from inside their products and replace it sometimes with nitrogen, Federal does the same thing with their Fresh Fire Pack cartridges to deter corrosion and lock-out moisture. The Federal Champion .22 LR Fresh Fire Pack contains 325 cartridges loaded with 36-grain copper-plated hollow-point cartridges. And their counterpart 5.56x42mm NATO rounds come 30 rounds to a can and are available in either 62-grain FMJ or 55-grain FMJ.

MTM Case-Gard has for many years devoted a great deal of their production to the storage of ammunition and recently have come out with some great new products that would lend themselves to long term storage. They are known for their cartridge boxes, but they also have an extensive line of ammo boxes more attuned to the storage of large quantities of

ammo. Many of those containers come equipped with rubber O-seals on the lids helping to keep moisture at bay. I personally believe their plastic military style ammo boxes are superior to those actually used by the military because they seal better, stack better and because they are made of heavy plastic there is no worry about rust and corrosion. This year MTM expanded that line to include what the company calls the "Ammo Crate Utility Box". These boxes are great for long or short term storage of ammunition or even other items. They come with rubber lid seals that are tight fitting, lockable, durable and are available in a couple of different large capacity sizes.

### BULLET POINT DAMAGE

A more immediate type of cartridge deterioration comes in the form of damage to the point of the bullets. Unprotected lead points over time can become bent or flattened and when that happens it can impact the performance of that ammunition. The result can be a reduction in shooting accuracy and a decrease in the bullet's ballistic coefficient value, which in turn lessens the bullet's ability to resist the horizontal drift from the wind. A way to get around this

"AT WORST, THE SHOOTER COULD BE SUBJECTING HIS OR HER FIREARM TO ELEVATED AND DANGEROUSLY HIGH LEVELS OF CHAMBER PRESSURES."

Federal's new 5.56 American Eagle Fresh Fire Packs come with the cartridges sealed in a metal can that has had the air extracted and replaced with dry nitrogen. Doing so locks out unwanted moisture and helps prevent corrosion.



## Ammunition



**[ABOVE]** The American Eagle Fresh Fire Pack 5.56 cartridges produced by Federal are available in cans of 30 rounds per container. **[BELOW]** Champion new Fresh Fire Pack .22 LR come in tins of 325 rounds and are sealed, vacuum-packed and with the internal air extracted and replaced with nitrogen.



problem is to use bullets that come with plastic tips. Not only does this style of bullet resist point deformation, usually they come with a higher bullet coefficient value which works to improve long range shooting performance.

A considerable amount of point damage can occur to the cartridges held inside box style magazines of rifles with heavy recoil. When these rifles are fired, it can sometimes result in the magazine-held cartridges impacting the front of the magazine enclosure, thereby flattening and damaging the tips of those bullets. In some extreme cases this heavy recoil may even drive the bullets deeper into the cartridge case. When this occurs it is in the best interest of the shooter to not fire those rounds due to the potential of higher chamber pressures occurring.

### THE WAY I SEE IT

The overall lesson to be learned here is if you take good care of your ammo and think about the conditions it is being subjected to those cartridges will take care of you. By taking a few simple precautions to store your ammunition in a reasonable manner and protect it from abuse your shot placement will likely be more consistent and in some cases you will be a lot safer. To put it another way, maybe you should treat your ammo much like caring for a small child. If you bounce that kid around on your knee a lot the kid could wind up spitting up on you. And, a cartridge could do the same if you bounce it around a lot. If you expose that same child to extreme temperatures – it is likely he or she will get sick and if you subject your cartridges to those same high temperatures they, too, could get sick, resulting in changes in performance or worse yet, damage to your firearm or even injuries to you. And, I think you can figure out what happens if your kid should incur injuries to the top of his or her head. This certainly wouldn't be good for either a child, or your ammo. **ASG**

**About the Author:** Thomas Tabor is a well-established gun writer having published approximately 900 articles within the U.S., Canada, New Zealand, and Australia. He holds positions as Contributing Editor for various magazines within the States; is the North American Correspondent for the Sporting Shooters Association of Australia; and recently published his first book entitled *Shooter's Bible Guide to the Hunting Rifle and its Ammunition*.

What is your ammunition storage solution? Post a picture on our Instagram page at [#americansurvivalguide](#) and share with us on Facebook at [facebook.com/AmericanSurvivalGuideMagazine](#)



# FIVE

## AMMO STORAGE SOLUTIONS

### 1. MTM AMMO CAN, TWO-PACK

Molded out of rugged polypropylene with reinforced bottom and thick sidewalls. Heavy-duty latch with double padlock tabs for your own locks. Equipped with a recessed handle and stacking ridges. 15 x 9 x 8.25 inches.

**Source:** mtmcase-gard.com

**MSRP:** \$24.99

### 2. PLANO FIELD BOX

Made from a durable polymer with a water-resistant O-ring seal, this ammo box has a brass bail latch and carry handle. It is lockable and with indentations and feet is also stackable. 13 x 8 x 10.5 inches.

**Source:** basspro.com

**MSRP:** \$12.99

### 3. RANGEMAXX SHOTSHELL AMMO CAN

A smaller sized field box, the RangeMaxx holds up to four standard boxes of shotgun shells or small electronics and rangefinders. The box's tongue and groove lid design resists water and features a hinged, lockable design for strength. Easy-grip handle for easy carrying. 14 x 6 x 5.5 inches.

**Source:** basspro.com

**MSRP:** \$9.99

### 4. SMART RELOADER AMMO BOX

SmartReloader ammo boxes are made from high-quality plastic to make sure your ammunition is stored properly. Their ammo boxes are not only storing boxes, but they will also work great at the range. SmartReloader ammo is guaranteed for 10 millions openings. The #1a box on the right fits 100 rounds 9x19, 9x21 and .380 Auto, while the #8 box on the left fits 32 rounds of .25 to .7mm (and similar).

**Source:** smartreloader.com

**MSRP:** \$7.79 (#8); \$9.09 (#1a)

### 5. MTM AMMO CAN COMBOS

MTM offers three ammo can combos: ACC45 (shown) which holds 700 rounds, ACC9 which holds 1000 rounds, and ACC223 which holds 400 rounds. The ACC45 kit includes: 1 each AC50, 7 each P-100-45s Ammo Boxes in tactical black. P-100-45s hold: 45 ACP, 45 Auto, 10MM, 40 S&W, 357 Sig. The ammo cans come with a water resistant O-ring. The inside dimensions are 5.8 x 11.0 x 7.2 inches, while the outside dimensions are 7.4 x 13.5 x 8.5 inches.

**Source:** mtmcase-gard.com

**MSRP:** \$46





# SERIE





# 101

## WHEN ESCAPE IS THE ONLY OPTION

Story by **Larry Schwartz**

**N**ame, rank, and serial number. When captured by the enemy and taken prisoner, these are the only three things the captor needs to utter but not for the reasons you might think.

Stemming from the Third Geneva Convention in 1949, prisoners of war have to provide their name, rank and serial number (as well as date of birth), but this is not only for identification purposes. It is also to assure that the person be treated “according to his rank or status.” If an officer fails to make known that he is an officer, he can’t be granted the privileges due an officer.

Article III, Section A of *Code of Conduct for the U.S. Fighting Force*, established by Executive Order 10631 by President Dwight D. Eisenhower on August 17, 1955, states: “If I am captured I will continue to resist by all means available. I will make every effort to escape and aid others to escape. I will accept neither parole nor special favors from the enemy.”

From these ideals was born a series of special training courses for military personnel called SERE Training, which stands for Survival, Evasion, Resistance, and Escape. SERE is a type of training first developed by the military following the Korean War. The survival, escape and evasion part of the training was already being taught but the resistance part was not. This new approach to the training was designed to help service members that find themselves on their own behind enemy lines to survive in the wild until they could get back to friendly lines. If they didn’t get back to friendly lines, the training prepares them to handle capture and interrogation as well as escape and evasion to where they want to be.

“IF I AM  
CAPTURED I  
WILL CONTINUE  
TO RESIST BY  
ALL MEANS  
AVAILABLE.  
I WILL MAKE  
EVERY EFFORT  
TO ESCAPE AND  
AID OTHERS  
TO ESCAPE. I  
WILL ACCEPT  
NEITHER  
PAROLE NOR  
SPECIAL  
FAVORS FROM  
THE ENEMY.”

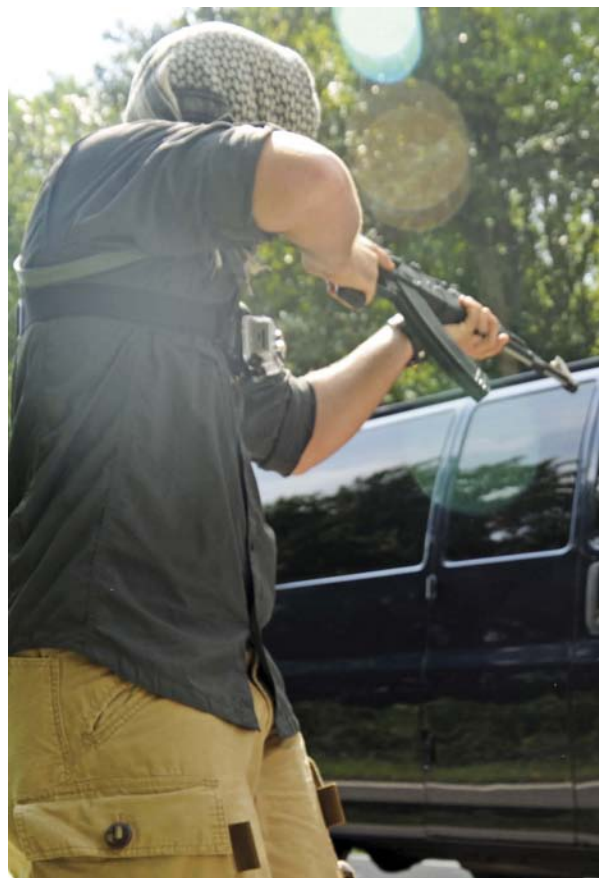


PHOTO COURTESY OF USAF





Knowing how to stay hidden and how to avoid leaving evidence of your having been there are key to effective evasion practices.



At the U.S. Army's comprehensive month-long SERE Training course at Fort Bragg, students understand the course was designed to be rigorous, severe, and realistic. The three levels of the curriculum are based mostly from *The SAS Survival Handbook* by John "Lofty" Wiseman, and there are parts of the upper courses that are very classified. In the course, students are taught how to survive by using a wide variety of skills useful in all possible climates, all kinds of weather, and with little to no materials or gear. They learn to make improvised tools by hand, the use of camouflage techniques, and the portion of the course on resisting the enemy if captured is based on the direct experiences of U.S. prisoners from the last five wars. Most importantly, they learn the interrogation and psychological techniques used in modern warfare.

#### WHY SERE IS USEFUL

While most readers of ASG won't find themselves behind enemy lines we can all face challenges where we need to survive, evade, resist, or escape. Here are some scenarios, all taken from real world events, that





Carjacking, whether it is by terrorists or the local gangbanger is unfortunately a real possibility in today's world. Knowing how to handle the carjacker is key to keeping you safe.

illustrate how skills learned in SERE training can help the common man or woman.

- > You are a tourist in a middle eastern or African country and are kidnapped and held for ransom.
- > You are a journalist or volunteer worker in any country in the world and are taken by a terrorist organization like ISIS,
- > You are lost in a bad neighborhood and need to find your way out and back to safety without being seen.
- > Your home is broken into during the night and you and your family is taken hostage while they search the house.
- > You just finished loading your groceries into your minivan when someone pushes you into the front seat and carjacks you and your child.
- > You are walking home from class when you are pushed up against the wall in a nearby alley and held at knifepoint while being robbed or sexually assaulted.
- > You and your family are under siege following a natural disaster when food supplies have run out and people are out looking to take what they want from those who still have supplies.



When in captivity, SERE tactics can ensure you survive the rigors of being a prisoner.



The introduction to the SERE course on Sigma 3's website states it pretty plainly: "Kidnapping is one of the biggest criminal enterprises in the world, and Americans are targets worldwide!...These skills could be used in a SHTF scenario, being kidnapped, economic breakdown, being stuck in a hostile country, evading capture, natural disaster, and much more!"

Basic survival skills like fire building, getting shelter from the elements and finding your way in unfamiliar places can be vital if your car breaks down or you are lost in a "hostile" area. Knowing the best places to hide or to avoid being noticed will help you

**SERE training focuses a great deal of time on not getting caught, so camouflage techniques are stressed.**

## The ABCs of SERE

Although many people think of SERE as a single course, it is really multiple courses taken in sequence and embodies a wide range of skills and topics.

**Survival:** Basic survival skills tailored to the environment and climate the individual is expected to be operating in; skills include the survival mindset, land navigation, fire making, water collection and purification, first aid, signaling and communications, shelter building, and identifying and gathering food in the wild.

**Evasion:** Route selection, travelling at night, using terrain to hide your presence, camouflage and concealment, and other topics to help you avoid being seen or leaving evidence of your having been there.

**Resistance:** The right mindset and attitude for resisting mental persuasion or physical force, techniques for defeating fear, knowing how fatigue leads to fear and mental weakening, understanding how to handle highly stressful situations, and methods for “mind over matter” to get past physical and mental challenges.

**Escape:** Similar to evasion but with an emphasis on how to be ready to take advantage of any opportunity to escape, planning what to do once you have escaped, the importance of actively looking for ways and opportunities to escape during the first hour after capture, and observing your environment to look for weaknesses you can exploit.

avoid detection and evade anyone who is following you or trying to find you. Your behavior and success in any situation where someone is trying to coerce you into doing something you don’t want to do, or shouldn’t do, can be enhanced with the principles learned in resistance training.

### WHAT KIND OF TRAINING IS AVAILABLE?

While each subject area (survival, evasion, resistance, and escape) is useful in itself, they are all related and you use skills learned in each one while doing the others. If you are evading detection or trying to avoid recapture you will be using your survival skills to navigate at night and live off the land until you get to where you are going. If you are in resistance mode then you will also be using your escape training to constantly be looking for weaknesses in your captors methods for opportunities you can exploit to escape.

You should look for courses and instructors who offer a combination of classroom or lecture-based instruction, coupled with hands-on experience practicing the skills and techniques you learn with realistic training

scenarios and constructive feedback. The sidebar lists the basic skills associated with each subject area. You should check to make sure the training you are looking at covers these or most of them before signing up for the course.

### WHERE CAN SERE TRAINING BE FOUND?

It is difficult if not impossible to find a course that will teach all four disciplines to civilians, especially in just a few days or for a few weeks, because that isn’t enough time to do the instruction and provide the hands-on experiences you need to deliver quality instruction and training on SERE. It is also difficult to find a good and qualified course that covers the resistance side of SERE

“THE STRESS INVOLVED IN SERE TRAINING IS AN EXCELLENT WAY TO LEARN ABOUT YOURSELF, YOUR STRENGTHS AND WEAKNESSES, AND BY PUSHING YOURSELF TO COME OUT BETTER AT THE END THAN WHEN YOU BEGAN.”







because there are not a lot of people who are qualified to do that type of training. There is also some risk of physical harm to students and this causes companies to carefully consider if they want to provide that type of training due to liability concerns.

There are, however, a number of schools you can find on the Internet that provide training for some or all of the SERE topics. Many provide the survival and evasion parts while only a few provide the resistance and escape training.

## FINDING AN INSTRUCTOR

Finding the right instructor is the hardest part of finding effective SERE training. Many companies will offer generic instruction on the Escape and Evasion part to add to their existing list of survival courses. Others will include Resistance and Escape training, but it may be more about subjecting the student to a bullying session than real R & E training.

You should look for a curriculum based on real world experiences and instructors who have real world experience in the topics they are teaching. Professionalism is a key here and you should search the Internet for comments about the schools and courses you are considering before you give them your time and your money.

We all need to know how to handle ourselves in these challenging situations. Most



**[ABOVE]** Communication and map reading skills are paramount to SERE. Your ability to escape in unfamiliar territory is increased dramatically by your ability to read a map you've never seen before.

**[LEFT]** Basic survival skills are going to be integral to any SERE situation, civilian or military, as you will likely have to provide for your own food, shelter, water, and navigation.

of us will never need to use the "R"esistance in SERE, but we can still benefit from knowing the other letters. The key is the mental toughness developed during this type of training is a benefit in any survival or challenging situation.

The stress involved in SERE training is an excellent way to learn about yourself, your strengths and weaknesses, and by pushing yourself to come out better at the end than when you began. As Maj. Anthony Hanson, commander, U.S. Army SERE School at Fort Rucker said, "What makes SERE school so unique is the stress tailored to the individual Soldier. Regardless of a Soldier's background, the SERE-C training approach exploits his or her weakness in order to induce the most amount of stress safely and effectively."

So, to wrap this up, decide what parts of SERE appeals to you, understand that the training can be useful to anyone and not just to military personnel stuck behind enemy lines, find a good instructor, and be prepared to give it your all so you can come out better prepared and a better person when it is over. **ASE**

**About the Author:** Larry Schwartz is an experienced outdoorsman, prepper, hunter, shooter, and instructor who enjoys passing on his love and knowledge of the outdoors and the shooting sports and how to "Be Prepared" to others through his writing and workshops on a wide variety of topics. He is a longtime and regular contributor to several Engaged Media publications, including this magazine.

## Instructors on the Internet

The following companies and their websites are available on the Internet for your review and contact. Some teach just some of the topics, such as survival and evasion, while a few teach all four subject areas. Always ask for references and search the web for comments about the company before deciding to spend your time and money there.

**SIGMA III:**  
survivalschool.us

**On Point Tactical:**  
onpointtactical.com

**Ancient Pathways Survival School:**  
apathways.com

**88 Tactical:**  
88tactical.com

**Kelly Alwood:**  
kellyalwood.com

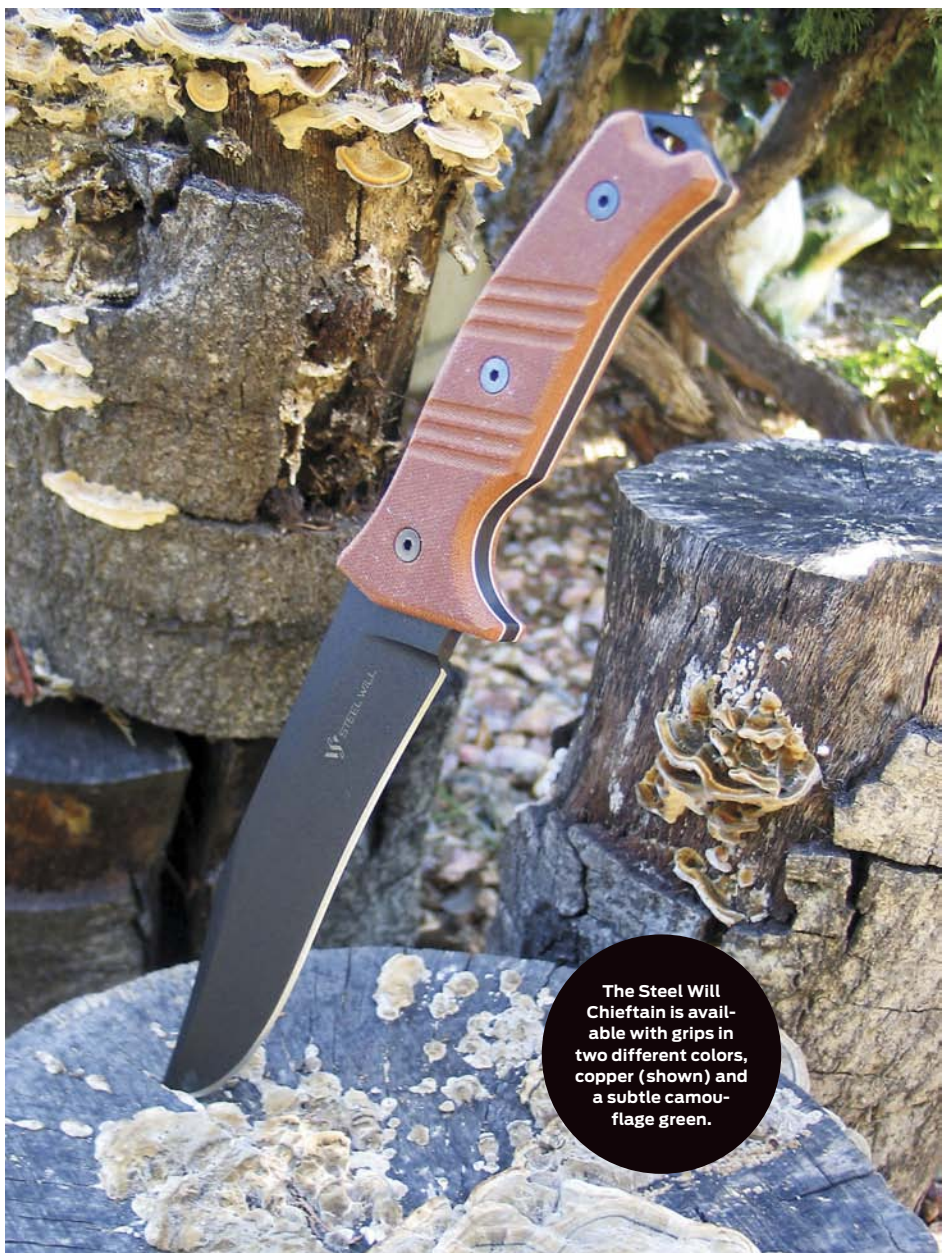
# The Chieftain

## STEEL WILL'S OUTDOOR OFFERING: THE LAST KNIFE YOU WILL EVER NEED

Story and Photography by **Andrew Philips**

**T**he house has been cold and dark for eight weeks now. Everything burnable has been burned and everything edible has been eaten. Outside, there's nothing left, while inside there's no reason to stay. The last of your neighbors hit the bricks over a month ago and you haven't heard from anyone since. Supplies have dwindled down to next to nothing: a can of beef broth and maybe a package of noodles — one of the bad ones. You'd kill to catch a stray dog even.

The sunlight hasn't penetrated the clouds or fog or smog or whatever happened to the sky since it all started, and all of the plants around your house are dead in the acrid soil. Only a few small animals are brave enough to show themselves, mostly rats. You can't stay here forever, and you've decided that long-hoped-for help that you were sure would arrive is not coming. You've got to leave. Roaming the house, you collect what few scant things are left: a bedroll, the last of the water from the bathtub, the can of beef broth and noodles, and your singular prized possession: Steel Will's 13 inches of command and power, the Chieftain.



The Steel Will Chieftain is available with grips in two different colors, copper (shown) and a subtle camouflage green.



SMG, Inc., has been in business since 2008 producing replica air guns under the Gletcher brand. Last year, they decided to start offering knives under the brand Steel Will in three different categories: tactical, outdoor, and urban. The knife on these pages is their latest foray into the bladed tools territory, no doubt one of the only ones they offer that bleeds the lines between outdoors and tactical.

## HUGE AND HEFTY

At 17.14 ounces, this is by all standards, a massive knife with which comes a comforting heft when used. The full-tang 1095 steel blade runs the full length and width of the Micarta handles sandwiched around it. Held by three countersunk hexagon sockets, the construction is seamless, and the Micarta (basically a paper, fabrics and resins) has a tough but smooth feel, while providing a surface that is slip resistant and insulated against electric shock. There is an oversized finger guard which makes this a perfect knife to use while wearing gloves, and there are two areas of jimping on the handle: one over the bolster for your thumb if the knife is being held upright and another if it is being held downward. Each way, the jimping gives your thumb a very secure place to rest and provides needed strength.

The pommel is equipped with a hole adequate enough for a lanyard, while jutting from it, the tang protrudes out to form a pointed glass-breaker well suited for any type of smashing. Although the pointed glass-breaker feature limits your ability to pound on this knife with the palm of your hand if you need to drive it in further. It is a nice feature if you need to break something.

## BLADE FURY

The clip-point blade is a monumental 7.48 inches long and nearly a quarter of an inch thick where the spine meets the guard. There's no choil (finger or sharpening) to speak of at the base of the plunge line, so using this knife for fine cutting (like tinder or small carvings) will be limited. However, this really isn't a "small carvings"



The 1095 carbon steel is rust resistant (not rust proof), holds its edge very well and is easy to sharpen. The powdercoating is to help prevent rust.

"IT IS HEAVY AND HAS THE THRUST AND MOMENTUM NEEDED TO GET WORK DONE, ALL THE WHILE LOOKING BEAUTIFUL ON YOUR HIP OR IN YOUR HAND."



The pommel end has a smartly pointed bezel designed to be used as a glass breaker.



Out of the box, the blade is razor sharp. The flat grind maintains a strong edge longer and is easy to sharpen.



Jimping is provided in two convenient places, one on either end of the handle for a variety of holds.



A well-formed finger guard offers a lot of protection from slipping and is big enough to allow for a gloved hand.



## Chieftain

Encasing this hefty knife is a stout nylon sheath which can be fitted to you or packed in a variety of ways.



**08:** The two hook and loop straps securing the knife in the sheath is a little overkill and slightly inconvenient when trying to brandish it quickly.



Though nice and secure, another element of possible over-design is this quick release "squeeze" buckle. The pocket is only five inches deep.



**10:** The plastic liner fits snugly into the sheath as well and is further lashed down by the included length of paracord.

### Specifications

**Overall length:** 13.11 inches  
**Blade length:** 7.48 inches  
**Blade thickness:** 0.24 inches  
**Blade-HRC:** 58-60  
**Blade finish:** Black traction coating  
**Blade material:** 1095 steel  
**Handle material:** Micarta  
**Sheath material:** Nylon

kind of knife. This is a knife for limb chopping, batoning wood, and close-quarters self-defense. It is heavy and has the thrust and momentum needed to get work done, all while looking beautiful on your hip or in your hand. The Chieftain comes in two different colors: the 1620 in the copper handle (shown) or the 1610, which has a more subdued camouflage tint.

The sheath is ballistic nylon with a rugged plastic liner to protect the material from the blade (there's no drain hole though). It can be attached to your belt or pack via webbing straps on the back, and the blade is held in place with two hook and loop fasteners. Included is a length of paracord to be used as a leg wrap. On the front of the sheath is a buckled pocket for a sharpening stone, specifically, or whatever you want to store there.

The true beauty of this particular knife is its weight. It fits well in your hand and provides a momentum unequalled in other knives, conveying a comfortable power just from holding it. It feels solid, well-built, and long-lasting.

This is a knife you will own for the rest of your life. **ASG**

### SOURCE

steelwillknives.com | MSRP: \$169.99



## First Aid

Not every survival situation is going to end well; there might be casualties at the onset of whatever calamity is befalling your group. You must immediately deal with injuries and perhaps deaths before you can actively pursue rescue, and to do so, a working knowledge of first aid and CPR is an important tool for your mental toolbox.



### 10 ESSENTIAL HERBS

— BARBARA HELLER, *THE COUNTRY WISDOM ALMANAC*

**Calendula:** Applied externally to treat skin irritations.

**Chamomile:** Taken as a tea to calm and relax; also good for stomach aches.

**Echinacea:** Boost immune system and helps fight off cold and flu.

**Garlic:** Eaten or applied raw as an antibacterial and anti-viral medicine.

**Ginger:** Eaten raw to combat motion sickness, nausea, or indigestion.

**Lavender:** Used as an essential oil to treat insomnia, headaches, and burns.

**Lemon balm:** Taken as a tea that calms, soothes, and uplifts.

**Peppermint:** Taken as a tea to cure stomachaches and headaches.

**St.-John's-wort:** Taken as a tea to treat mild depression or anxiety.

**Valerian:** Relieves anxiety or nervous tension.



▶ One can use sugar (or honey) in the place of topical antibiotics when treating a wound. Sugar sucks water from bacteria by osmotic shock, killing the bacteria. Make sure the wound has clotted first before applying the sugar.

— RAGNAR BENSON, *DO-IT YOURSELF MEDICINE*

▶ Treat frostbite in water around 112 degrees F. Blisters should not be broken and the thawing skin should not be massaged due to damage to the tissue.

— WARREN COLE AND CHARLES PUESTOW, *FIRST AID, DIAGNOSIS AND MANAGEMENT*

▶ If a splint is not available, a rolled up pillow or blanket supported by sticks can be tied around a broken limb.

— WARREN COLE AND CHARLES PUESTOW, *FIRST AID, DIAGNOSIS AND MANAGEMENT*

▶ Ten foods that get rid of an upset stomach: bananas, ginger, plain yogurt, papaya, apple-sauce, oatmeal, white rice, chamomile tea, chicken broth, and aloe vera juice.

— KEITH BRADFORD, *LIFE HACKS*

▶ Pineapple juice is five times more effective than cough syrup.

— KEITH BRADFORD, *LIFE HACKS*

▶ Mustard and toothpaste will help ease the pain of minor burns.

— CHRISTOPHER NYERGES, *HOW TO SURVIVE ANYWHERE*

▶ Applying a cut onion to a bee sting will reduce the inflammation and pain.

— CHRISTOPHER NYERGES, *HOW TO SURVIVE ANYWHERE*

▶ Make homemade icepacks by adding one part rubbing alcohol to three parts water and freeze. It will get cold but not hard.

— CHRISTOPHER NYERGES, *HOW TO SURVIVE ANYWHERE*

▶ Spider webs can seal as well as heal small cuts.

— KEITH BRADFORD, *LIFE HACKS*

▶ A handful of violet leaves and a cup of water makes a tea that is good for sore gums or a cleanser for rashes.

— KATHLEEN BROWN, *THE COUNTRY WISDOM ALMANAC*

▶ Prepare a solution of one part bleach mixed with three parts water, and put it in a spray bottle for sanitizing and disinfecting hands and gear. Don't touch the bottle with dirty hands.

— RICHARD DUARTE, *SURVIVING AN URBAN DISASTER*

▶ To stop a bullet wound from bleeding, use the applicator and insert a tampon into the wound.

— CREEK STEWART, *BUILD THE PERFECT BUG OUT SURVIVAL SKILLS*

▶ You can disinfect medical equipment with mouthwash.

— JOEY GREEN, *LAST-MINUTE SURVIVAL SECRETS*

▶ A cotton ball soaked in Tabasco sauce can be used to anesthetize a sore tooth. Rinsing with hydrogen peroxide has a similar affect, as does peanut butter and mustard powder, salt, a wet tea bag, and vanilla extract.

— CLIVE JOHNSON, *SURVIVAL TIPS: 150 WAYS TO SURVIVE EMERGENCY SITUATIONS*

▶ To kill head lice, saturate your hair in mayonnaise, wrap tightly with plastic wrap or a shower cap and then a towel. Let stand for two hours before rinsing with white vinegar. The mayonnaise suffocates the lice and the vinegar releases the nits.

— JOEY GREEN, *LAST-MINUTE SURVIVAL SECRETS*

▶ To remove cactus spines from your skin, pour a nickel-sized dollop of white glue over each embedded spine. Let the glue completely dry and then peel it off. The spine should come with the glue.

— CLIVE JOHNSON, *SURVIVAL TIPS: 150 WAYS TO SURVIVE EMERGENCY SITUATIONS*



# For a Most Important Trip

## ECHO SIGMA'S GET-HOME BAG IS READY FOR THE LONG HAUL HOME

Story and Photography by **Ryan Lee Price** | Additional Photography by Henry Z. DeKuyper

**T**raffic is a nightmare. Creeping along bumper to bumper on the freeway during rush hour is hardly an efficient use of your time, and you sit behind the wheel thinking of all the other things you could be doing. Golf. Helping your wife with dinner. Playing with the kids. Your job is important to the well-being of your family, which is why you sit, day after day, staring at the car in front of you with the same goal as everyone else around you: to get home.

Imagine a slightly different scenario. While you're wrapping up some last minute business at the office, an 8.1 earthquake strikes. The rumbling lasts for three minutes and practically levels most of the city's infrastructure. Several key bridges along your commute have collapsed, and there's no practical way home, except by air or by foot... and you're fresh out of helicopters. There's no cell service; your thoughts immediately turn to your family. Getting home just became Priority Number One. Because you're prepared, sitting in the trunk of your car is Echo Sigma's

Get-Home Bag (GHB), a lifeline that will be your ticket home no matter what situation is thrown at you.

So, leave everything behind that can't be used toward your goal and start walking...

Forty miles usually takes you an hour by car, and since the shadows of most city centers fall on crime-ridden urban areas, you've only got a couple of hours before nightfall to make it through. Try to look unimportant. Remove your tie and cufflinks. Blend in. Put on the running shoes you keep under your desk and wear an old sweatshirt or jacket. Remove anything from the outside of the GHB that would give anyone any reason to suspect it is nothing but an ordinary red backpack. The GHB is your salvation; you mustn't allow anyone to take it.



### STAY HYDRATED

Your emotions are in overdrive and your body will be using a lot of fluids. It is important to stay hydrated long before you realize you're thirsty. The Condor Outdoor 2.5-liter hydration bladder has a wide mouth and is easily filled. It fits in the pocket closest to your back and includes a pressure-fed tube. Since







## Most Important Trip



**1.** A standard pair of work gloves will keep your hands safe (and perhaps even clean) if you need to deal with potentially dangerous or sharp items. **2.** For dust and eye protection, included are two N95 respirator masks and goggles to protect you from semi-hostile atmospheric situations. **3.** The plastic bright orange compass includes a whistle. **4.** The Wallace Guidebook for Emergency Care and Survival is a great resource for most survival situations. **5.** The 50 feet of paracord has a thousand uses, from helping set up a shelter to attaching a chemical stick to one end and swinging it above your head for an effective signaling device. **6.** These 40 waterproof matches as well as the Live Fire emergency starter can aid in fire starting. Lightly scrape the surface and light it with a spark or match. It will burn for as long as you need to ignite a larger fire.

you're looking at a two-day journey, there is an additional 2.5 liters of water in pouches good for five years (Echo-Sigma uses AquaBox and Mainstay brands, but luckily your kit comes with Mainstay pouches so the bulk has been cut dramatically compared with AquaBox; the pouches pack better and result in less trash).

Hopefully you won't need it, but if you run out of water, there is in the included Compact Survival Kit a bottle of water purification tablets for an additional 25 quarts of water, provided a source can be found. How many rivers do you pass on your commute to work?

## BREATHE EASY

About a mile from the office, a series of fires line both sides of the streets. Visibility is poor and the smoke drifts through the ruins in thick clouds. In your GHB are two N95-rated respirator masks and a pair of protective safety goggles. Though it won't keep out all of the smoke, pouring some water on the outside of the mask will help you through it.

## NIGHTFALL AND RAIN

You've been walking for miles, and it is getting dark. Clouds are rolling in. The streetlights are dark, and strange shadows begin to fill the streets. Looting, crime, and lawlessness starts to run rampant. Your Fenix LED flashlight has three levels, high (with 187 lumens), medium (90 lumens) and low (27 lumens). It takes two AA batteries, but the kit comes with six. On the high setting, you've got enough juice for seven hours of continuous use. Keeping it at medium is less conspicuous, but you wish your pack had a knife (you should have gone with the SOG FastHawk option).

When the rain starts, you'll be kept dry by the emergency poncho, a clear plastic poncho (61 x 65 inches) large enough to cover you and your pack.

## REST AND RECUPERATE

Hours have passed. The rain has stopped but you're getting tired and you're not sure how much longer you can go on. Up ahead is a small neighborhood park littered with pine trees





## Echo-Sigma Compact Provision Pack

The Echo-Sigma Compact Provision Pack is designed to provide one adult 2400 calories per day for one to three days, depending on activity level. It also includes 2.5 liters of water in compressible pouches with a five-year shelf life.

- ✓ 6 Food Ration Bars (400 Calories each and nutritionally fortified)
- ✓ 2.5 Liters of Five Year Storage Pure Drinking Water
- ✓ Paper Napkins



and a stand of shrubs that would provide good cover for the night. Survival Industries provides a thermal sleeping bag cocoon that will reflect heat back toward your body, and the Coghlan Emergency Tube Tent is easily erected between two trees with the help of the 50 feet of black 550 paracord and the Gerber Dime multi-tool. Also in the compact survival kit is an emergency blanket that can help stave off the cold. Along with the hand warmers you activate and put in key locations, you are fairly comfortable.

Break out one of six 400-calorie food ration bars in the three-day provision pack, and some food fills your empty stomach. Sleep doesn't come easy, so by the light of one of the two chemical light sticks, you thumb through *The Wallace Guidebook for Emergency Care and Survival*. It is an interesting read, filled with very useful information for a wide variety of survival situations. Soon, amid the after-shocks and the rumbling noise of a city gone mad, sleep finds you.



## Echo-Sigma Compact First Aid Kit

Having quickly accessible first aid is key to taking care of yourself and being self reliant in the event of an emergency. In addition to the first aid kit and the tools you will need during an emergency, you have access to 14 exclusive online training videos to familiarize yourself with various first aid procedures.

- ✓ Four-inch scissors
- ✓ Three-inch tweezers
- ✓ 1 first aid card
- ✓ 20 plastic bandages
- ✓ 12 alcohol swabs
- ✓ 10 wet wipes
- ✓ 10 antiseptic swabs
- ✓ 3 sting relief swabs
- ✓ 4 pain relief tablets
- ✓ 2 3 x 3 inch sterile gauze pads
- ✓ 12 inch x 5 yards gauze roll
- ✓ 15 x 9 inch sterile abdominal dressing
- ✓ 1 0.5 inches x 2.5 yards roll of tape
- ✓ 1 disposable CPR faceshield



## Echo-Sigma Compact Survival Kit

The Echo-Sigma Compact Survival Kit is a compact storage solution for many of the smaller items that can be easily misplaced if not provided in a secure pouch.

- ✓ 1 Compass
- ✓ 1 Emergency Whistle
- ✓ 1 Emergency Blanket
- ✓ 1 BIC Butane Lighter
- ✓ 1 Magnesium Fire Starter with Flint Striker
- ✓ 40 Waterproof Matches
- ✓ 1 Live Fire Sport Emergency Fire Starter
- ✓ 50 Inches of Duct Tape
- ✓ 1 Bottle of Water Purification Tablets
- ✓ 2 Chemical Light Sticks
- ✓ 2 BIC Brand Ball Point Pens
- ✓ 1 Pad of Paper
- ✓ 1 Set of Earplugs

## Enable Your Ideas with a PCNC Mill

Discerning gun and knife enthusiasts know there's only one choice in CNC for affordable precision: the Tormach PCNC 1100. Take aim at your most demanding machining needs - engraving, milling, threading, reaming, and boring. Big or small, Tormach hits the bullseye to deliver for you.

Shown here with optional stand, LCD monitor, machine arms, and accessories.

Tormach PCNC 1100 Series 3 starting at **\$8480** (plus shipping)



Centilever GoPro camera Picatinny Mount made by Strikemark, manufactured on a PCNC 1100.



Follow knifemaker John Grimsno as he makes his own knives with a PCNC 1100 on his web series, Knifemaking Tuesdays, at [www.tormach.com/kmt](http://www.tormach.com/kmt).

[www.tormach.com/asg](http://www.tormach.com/asg)

### FIRST AID

With the heavy-duty work gloves on, you attempt to scramble over the rubble of a damaged building but instead, trip and slice a significant gash in your knee. You can walk, but it is bleeding quite a bit. The Echo-Sigma Compact First Aid Kit contains exactly what you need: A tiny pair of folding scissors to cut away your pants, small tweezers to remove a couple of pieces of gravel, alcohol swabs, antiseptic swabs, sting relief swabs, sterile dressing and gauze.

### SOLDIER ON

The slog continues, mile after mile. Your knee is completely swollen and walking is very difficult. On several occasions, you considered giving up, sitting down and gathering your signal gear together to attempt to be rescued. The red pack itself stands out against the debris of the earthquake. The emergency tube tent is a very bright orange and the thermal sleeping bag and emergency blanket are very reflective. With all of the helicopter activity overhead, the best method to garner attention is the 2.5 x 4-inch Plexiglas signal mirror.

## THE ECHO-SIGMA GET-HOME BAG PACK

The bag with all of its contents weighs about 16 pounds, but much of that weight comes from the 2.5 liters of water pouches that are included. The Condor Outdoor Assault pack is a very sturdy pack, and there are a number of colors available: black, red, and coyote tan are all standard, while A-TACS and multi-cam patterns are offered as a \$40 option on Echo-Sigma's site. The bag has a fairly extensive number of interior and exterior pockets which Echo-Sigma puts to good use arranging all of the gear that's included, with enough space left over to include a few things that maybe are important to you or your climate/environment. One of the advantages of ordering directly from Echo-Sigma is the ability to upgrade some of the standard items. You can choose a different provision kit, upgrade the model of flashlight, add another multi-tool or tack on folding shovel or even a tomahawk.



**A.** With plenty of webbing, Echo-Sigma's GHB can host a variety of gear on the outside of the pack and at the ready when you need it most. **B.** The bottom has webbing and two straps to add additional gear, such as a bedroll or even a full-size sleeping bag. **C.** If there was a fault to be found, it is these shoulder straps. Though the padding is comfortable, the adjustment points are difficult to manage and quickly change, especially on the go and taking turns shouldering the load with someone else. **D.** Each of the four compartments on the pack has double zippers but no rain shield. The zippers glide effortlessly and the pack opens very wide.



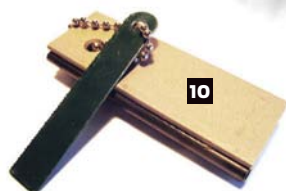
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8



9



10

**7.** The Fenix E25 is a 187-lumen LED flashlight that is impact resistant and waterproof (to IPX-8) thanks to its aircraft-grade aluminum body. Running on two AA batteries, it can last for over two hours on high but up to 26 hours on low. **8.** The diminutive Gerber Dime multi-tool includes: Needlenose pliers, knife blade, file, nail cleaner, small flat blade screwdriver, medium flat blade screwdriver, Phillips screwdriver, tweezers, and a bottle opener. **9.** The 2.5-liter hydration system is from Condor Outdoors and fits snugly in the back pocket of the pack. The feed line has a compression squeeze release, and the opening is large for easy filling. **10.** The striker of the magnesium fire starter doubles as a saw blade and is connected to the Compact Survival Kit via a lanyard so it won't ever be lost.



## THE ECHO-SIGMA GET-HOME BAG

- ✓ 1 Compact Backpack
- ✓ 1 Hydration System (2.5 Liter) by Condor Outdoor
- ✓ 1 Echo-Sigma 1-3 Day Provision Pack (Arid)
- ✓ 1 Echo-Sigma Compact Survival Kit
- ✓ 1 Echo-Sigma Compact First Aid Kit
- ✓ 1 Gerber "Dime" Multi-Tool
- ✓ 1 Waterproof LED Flashlight by Fenix (187 Lumen)
- ✓ 50 Feet of Military Grade 550 Paracord
- ✓ 10 Extra Large Zip Ties
- ✓ 1 Coghlan's Emergency Tube Tent
- ✓ 1 Emergency Poncho
- ✓ 1 Plexiglass Mirror for signaling help
- ✓ 1 Thermal Sleeping Bag Cocoon by Survival Industries
- ✓ 6 Premium AA Alkaline Batteries
- ✓ 1 Pair Leather Work Gloves
- ✓ 2 N95-Rated Respirator Masks
- ✓ 1 Pair of Protective Goggles
- ✓ 2 Hand Warmers by Coghlan's

However, upon looking up, you notice the bent and damaged welcome sign to your town. You've made it. Your street is just a mile more and it's all downhill.

So, while you're sitting in traffic, you can be sure of two things: 1) An hour of slow-moving traffic is a lot better than walking for 18 hours; and 2) You have the comfort of knowing that there's a high-quality Get-Home Bag sitting in your trunk if you ever need it. Just hope you don't.

The kit is designed to help you navigate, signal for help, secure warmth (three different means of starting a fire are included), protect you from the elements (sleeping bag, tube tent), deal with minor medical issues, provide provisions, and protect you from semi-hostile atmospheric situations (gloves, goggles, mask).

The folks at Echo-Sigma have done a great job of including just the things you need while keeping weight and cost as low as possible. That said, nothing is perfect, so in addition to the contents of this kit, I'd consider adding a few things. **ASB**



### SOURCE

echo-sigma.com  
MSRP: \$249.99





**INTRODUCING THE  
LAR-8 X-1 RIFLE**

Combining custom features and all-new components with RRA's years of experience and dedication to making the best rifles available, the RRA X-Series.

EXCLUSIVE  
RRA HUNTER  
MUZZLE BRAKE

LAR-8 X-1 RIFLE X308A1750T  
TAN WITH OPERATOR A2 STOCK  
MSRP: \$1850\*

# TUNED FOR PERFECTION

\* Prices are subject to change.  
Optics and scope mount not included.



ROCKRIVERARMS.COM

PERFORMANCE TUNED.

# Gear Guide

## FIRST AID

### Mini-First Aid Kits

Pocket Sized Medics to Treat All Your Minor Medical Mishaps

Story by Michael D'Angona

MINOR SCRAPES AND CUTS are not life threatening injuries, but can become a painful annoyance if not treated. Simple, pocket-sized first aid kits can accomplish this task while allowing you to concentrate on the more important survival tasks at hand. Small enough to fit in your coat pocket or fanny pouch, these portable medical kits contain all the items you need to treat minor injuries out in the wild. These include bee stings, minor burns, cuts from knives or fishing gear, scrapes from thorny bushes or itching from irritating insect bites.

The key to choosing the best mini-kit is to find one with a variety of items. Due to the fact that these kits are meant for short term use, it is a good idea to find one that covers a large spectrum of possible injuries. Also, remember to buy one kit for each person in your group. These first aid kits are meant to be carried at all times. If any member of your party gets lost or separated they will be fully prepared when alone in the wild. Examine all contents carefully. Check expiration dates and add or remove items, if needed, to suit your particular needs. One small pocket-sized pouch is all it takes to prepare for possible injuries in the outdoors...why leave home without one?



#### Rapidcare 37 Piece First Aid Kit

When an emergency hits, the Rapid-Care First Aid kit is there to handle all your minor injuries, quickly and effectively. 37 first-aid items are packed within the durable hard shell container that treat all variations of potential everyday injuries. From cuts and scrapes to minor punctures or bites, this is your go-to pack when home or traveling through unknown territory. Store several kits throughout your home, office, vehicle, and supply bags for ultimate preparedness. Kit includes bandages, gauze pads, butterfly wound closures, alcohol prep pads to disinfect the wounded area, and a cotton tip applicator for precision applications. Convenient compact size: 3.75 x 5 x 1.25 inches.

Source: [MorePrepared.com](http://MorePrepared.com)  
MSRP: \$1.95



"SMALL ENOUGH TO FIT IN YOUR COAT POCKET OR FANNY POUCH, THESE PORTABLE MEDICAL KITS CONTAIN ALL THE ITEMS YOU NEED TO TREAT MINOR INJURIES OUT IN THE WILD."



### Dental Medic First Aid Kit

Few people think about dental issues when prepping for unseen emergencies. Even fewer people think about their teeth when packing for a day trip or hike, and this could become a big mistake. Problems with your teeth or gums can add unneeded stress to an already highly stressful situation. The Dental Medic kit can become your go-to dentist, when visiting a true dentist is not an option. Equipped within this ultra-light (2 ounce) zip pouch are all the needed tools for basic dental repair and pain treatment until you are able to reach a qualified professional. It includes dental wax to help hold teeth in place, temporary fillings, cotton gauze, a tea bag to stop bleeding, cotton pellets, topical anesthetic, floss, toothpicks and instructions to help you with all your self-help dental needs. A definite "must-have" item for everyone.

Source: [Nitro-Pak.com](http://Nitro-Pak.com)  
MSRP: **\$13.99**

### Pocket Medic

Preparedness for first-aid can sometimes be forgotten when venturing out for a simple one day excursion. But when an injury occurs, you may wish you packed the necessary supplies. The Pocket Medic makes it easy for you. Contained within its waterproof DryFlex™ bag, is nearly everything a single adventurer needs to handle most unexpected mishaps. Antiseptic wipes, protective ointments, and stay-stuck bandages suppress most stings and treat minor cuts and scrapes. Hospital-grade forceps remove irritating splinters or parasitic ticks that may embed themselves deep under your skin. Relief from your injuries can also be taken care of with an assortment of medications that treat the throbbing pain, skin inflammations, and common allergies that can be agitated by outdoor irritants. Weighing only 3.2 ounces and conveniently sized to fit almost anywhere, the Pocket Medic should be near the top of your supply list.

Source: [AdventureMedicalKits.com](http://AdventureMedicalKits.com)  
MSRP: **\$7.50**

### Wound Medic

This specialized personal first-aid kit is a must for all deep-woods injuries where immediate medical care is unavailable. A jagged cut from a hand saw, a mishap with a hatchet, or a sharp branch can all cause intense injuries. A serious wound can lead to severe medical problems if left untreated. Luckily for you, this kit features over a dozen key items for wound care including sterile gauze, wound closure strips, povidone iodine, a 10 cc 18 gauge tip syringe for irrigation, antiseptic wipes, antibiotic ointments and Skin Tac™ topical adhesive wipes. Complete instructions are included to get the job done right.

Source: [AdventureMedicalKits.com](http://AdventureMedicalKits.com)  
MSRP: **\$10**

## FIRST AID KITS



### Lightweight Hikers First Aid Kit

Drop this first aid kit in your back pocket and forget about it. It is small enough to go unnoticed during your outdoor outing, but extremely vital when an injury occurs that could ruin your great day out in the woods. This kit features all the needed necessities for minor abrasions, scratches, bites or other simple injuries you may encounter during your day hike. Weighing only 40 grams, this micro-kit contains over 21 items including a multipurpose steel needle, three types of bandages, adhesive strips, gauze pads, antiseptic pads, moleskin and a convenient travel towel. Off trail mountain bikers, hikers, cross-country joggers and nearly everyone can benefit from this palm-sized companion. Patch yourself up in minutes and keep going strong!

Source: [GoFastAnfGoLight.com](http://GoFastAnfGoLight.com)  
MSRP: \$3.96



### Travel Medic

You can't take your entire medicine cabinet with you when you travel and thanks to the Travel Medic...you don't have to. This highly compact first-aid kit specifically targets injuries or minor body discomfort that may occur when traveling. Cuts or scrapes can be treated instantly with alcohol swabs, antiseptic wipes and a variety of bandages so you can get on with your intended plans. Stomach discomfort, a staple of nearly all types of travel, can be remedied with one of many included medications. Have a headache from the stress and pressure? Acetaminophen and Ibuprofen can ease your pain quickly and effectively. Nearly forty items make up this indispensable traveling companion. All these fantastic items are packed in a durable, lightweight and fully reusable pouch that fits easily in luggage, packs, purses or coat pockets. Size: 5 x 4.5 x 0.75 inches; weight: 3.2 ounces.

Source: [AdventureMedicalKits.com](http://AdventureMedicalKits.com)  
MSRP: \$12



### Ultralight Pocket Size First Aid Kit

Ultra inexpensive and incredibly useful, this low cost first aid kit offers the basics of minor first aid treatment in a compact package that's small enough to fit just about anywhere. Packed within a reusable hard shell case are 17 items needed to tend to minor wounds encountered throughout your day. Multi-sized bandages, antiseptic towelettes, and antibiotic ointments are available to you whenever and wherever your adventure takes you. With room enough to pack additional items like pain relievers or insect sting relief medicine, this durable kit is ideal for everyone from an advanced survival prepper to a child's backpack. The low cost makes it easy to buy several kits to store throughout your home, car, purse or back pocket every time you venture out. Weighs an incredibly low 1.6 ounces.

Source: [GoFastAnfGoLight.com](http://GoFastAnfGoLight.com)  
MSRP: \$1.79





**Personal Survival  
First Aid Tin**

Coleman, a trusted name in outdoor products for years, now offers a personal first aid tin to keep you in tip-top shape when enjoying the wonders of nature. Contained within its crush-resistant, hinge top box are nearly 75 first-aid items useful for all types of outdoor injuries. Choosing from five distinct bandage sizes and shapes, your cuts or scrapes will be patched up in no time. Sting relief wipes handle unpredictable insect bites, while antibiotic and antiseptic pads keep your wounds clean and bacteria-free. 40 waterproof matches, two sizes of safety pins and a razor blade round out the amazing assortment. All items are 100% recyclable and the tin container is reusable for a multitude of survival applications.

Source: **ColemanFirstAid.com**  
MSRP: **\$9**

**1st Aid Kit Packet Medic**

Good things come in small packages and the 1st Aid Kit Packet Medic is no exception. This mini-kit is perfect for day hikers, fisherman, campers, skiers, preppers, or anyone venturing outdoors in nearly any environment. It contains all the necessities to treat minor wounds, cuts, scrapes, stings, or burns. When Mother Nature strikes, this kit answers with a solution in the form of antibiotic ointments, bandages, sting relief pads, safety pins, towelettes, Motrin® for pain relief, and moleskin bandage material — all packaged in a waterproof carrying bag. Stores perfectly in your glove compartment, backpack, purse or any type of emergency supply bag. Size: 4 x 3 inches; weight: 2 ounces.

Source: **Nitro-Pak.com**  
MSRP: **\$6.50**



# A in the hand is worth...

...a LOT more than ANYTHING that's not at hand when you need it. Your large, powerful, heavy, difficult to carry (fill in the blank) is of absolutely no use when you've left it at home, in the car, etc...

Regardless of your location, your dress or the season, NO gun is easier to carry or conceal than a North American Arms mini-revolver. Is it an effective deterrent? Would you want to be shot with one?

Join the millions who "don't leave home without one"!

Remember Rule #1: **Have a gun!**

**North American Arms Inc. • 2150 S. 950 E. • Provo, UT 84606-6285**  
***www.NorthAmericanArms.com***

***Convenient, Reliable & Effective!***

### Safe & Dry Weather Resistant First Aid (Small)

Water damage can ruin just about anything, but it won't affect this first aid kit! The Safe & Dry kit is perfect for use near all marine environments. All of its 31 items stay dry and store easily in its weather resistant roll-up bag. This makes it ideal for boats, canoes, trips to the lake or pier or anywhere water may come into contact with your first-aid supplies. The mixture of items in the stay-dry bag can treat most minor injuries, as well as those afflictions that happen "on the water". Lip balm, sunscreen and motion sickness tablets relieve water-specific injuries. Bandages, alcohol prep pads, adhesive strips and sterile gauze pads are included to take care of all other types of bumps and bruises encountered throughout your adventure at sea.

Source: [LifeLineFirstAid.com](http://LifeLineFirstAid.com)  
MSRP: \$7.99



### CPR Kit

Not all first-aid kits are filled with bandages and alcohol swabs. Sometimes the injury is far more serious. When CPR has to be applied, this rescue kit is exactly what you need. Compact, disposable and economical, this small pack includes everything you need for a one-time operation of CPR. A single use barrier for mouth to mouth resuscitation is included, providing operator safety by using a one-way valve and barrier filter to block contamination. Included CPR shield, a pair of vinyl gloves and an alcohol prep pad provide further sanitary protection while performing this life-saving technique. A soft carrying bag and keychain keeps this vital set close by whenever the unexpected occurs.

Source: [LifeLineFirstAid.com](http://LifeLineFirstAid.com)  
MSRP: \$5.99

### Weather Resistant Glove Box First Aid

Compact, durable, and highly practical, this first aid kit exemplifies conservation of space while providing you with your most needed basic injury items. The case itself is highly durable, weather resistant and can attach easily to your belt loop or backpack with its included carabiner. Inside it is tightly packed with all your needed essentials. A staggering 28 first aid items are at your disposal if and when an injury occurs. Multiple bandages, anti-septic towelettes, gauze pads, alcohol prep pads and adhesive tape to hold it all together are included in this micro-kit. Buy several for all members of your family or outdoor group. Store easily just about anywhere!

Source: [LifeLineFirstAid.com](http://LifeLineFirstAid.com)  
MSRP: \$6.99





## Self-Defense



It is common in a survival situation involving a whole community or residential area that most of the people are caught unaware and unequipped to deal with what is happening. They will rely on others for support. If things get dire, people get desperate and might turn on the offensive to obtain what they need. Being self-sufficient and well stocked with supplies should force you to be vigilant against those that want to take what you have. Knowing how to defend yourself and your family is an important aspect to survival.

▶ An unprovoked assault is not a sport in which you are required to adhere to rules of fairness. If you are assaulted, be prepared to break any so-called rules you may have been taught, such as "hitting a man in the groin is out-of-bounds" or "biting and pulling hair is girly." Self-defense doesn't have to look good; it just has to work.

— KATY MATTINGLY, SELF-DEFENSE: STEPS TO SURVIVAL

▶ When you're in pain during an attack, cursing releases enkephalin, which raises your pain tolerance, causing you to hurt less.

— KATY MATTINGLY, SELF-DEFENSE: STEPS TO SURVIVAL

▶ If you ever have to park or wait in a dangerous neighborhood, do so in front of a bank. They're well lit and have lots of video surveillance.

— KATY MATTINGLY, SELF-DEFENSE: STEPS TO SURVIVAL

▶ If you think someone is following your car, take four right turns to make a circle. If they're still behind you, you're being tailed.

— KATY MATTINGLY, SELF-DEFENSE: STEPS TO SURVIVAL

▶ Rohypnol, a date rape drug, tastes very salty. If your drink suddenly has a salty taste, stop drinking it immediately.

— KEITH BRADFORD, LIFE HACKS

▶ Feeling nervous? Start chewing gum. Your brain will reason that you're not in danger because you wouldn't be eating if you were.

— KEITH BRADFORD, LIFE HACKS

▶ When throwing a punch, clench your fist only at the last second. You lose a lot of power clenching throughout the swing.

— KEITH BRADFORD, LIFE HACKS

▶ Avoid displaying lights at night during an emergency. If the power to your city is out, lights will announce you have supplies or a means to survive.

— RICHARD DUARTE, SURVIVING AN URBAN DISASTER

▶ Should you encounter a grizzly bear, stay calm, avoid eye contact, speak in a calm monotone voice while slowly backing away. Drop an item of clothing (hat or bandana) between you and the bear. He will stop to sniff the item which gives you more time.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ Vinegar neutralizes and counteracts the effects of tear gas and pepper spray. Cut the bottom off of a two-liter soda bottle, place a handful of cotton balls soaked in apple cider near the opened cap end and place over your mouth and nose. Air comes in through the cap end and the vinegar absorbs the toxins.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ You can make an impromptu burglar alarm by sprinkling potato chips under a window or inside a door way. When an intruder enters, he will step on the chips and make a loud crunching sound.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ Strain a mixture of 8 tablespoons of cayenne pepper, 12 ounces of rubbing alcohol and 2 tablespoons of vegetable oil into an empty pump bottle to make your own pepper spray.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ A "safe distance" is the minimum distance you should maintain between you and any suspicious person. This distance is between four to eight feet. Maintaining a safe distance forces a potential attacker to take two steps toward you first before he can hit you. This gives an alert person enough time to evade and escape or counter-attack.

— STEFAN VERSTAPPEN, THE ART OF URBAN SURVIVAL, A FAMILY SAFETY AND SELF-DEFENSE MANUAL

▶ When you call 911, the first thing you should say is your location. They immediately send police when they have an address.

— STEFAN VERSTAPPEN, THE ART OF URBAN SURVIVAL, A FAMILY SAFETY AND SELF-DEFENSE MANUAL



A man with grey hair, wearing a blue t-shirt, is aiming a silver and black handgun directly at the camera. He is standing in a grassy field with a blue sky and clouds in the background. The image is a close-up, focusing on the man's face and the gun.

"BUYING A GUN AND STICKING IT IN A DRAWER ISN'T ENOUGH.  
TAKING A COUPLE OF KARATE LESSONS WON'T DO."





# 360-Degree Protection

## BUILD YOUR **SELF-DEFENSE SKILL SET** WITH THESE TACTICS

Story and Photography by **Steven Paul Barlow** | Additional Photography by Stephanie Barlow

**A**re you prepared to defend yourself, your family and your home? In an extended emergency situation, could you safeguard your limited supplies? We all would like to think so. But buying a gun and sticking it in a drawer isn't enough. Taking a couple of karate lessons won't do. To be truly prepared to defend yourself, you have to take a multi-disciplined approach to personal protection. You have to become proficient in situational awareness, hand-to-hand tactics, less-than-lethal weapons, edged weapons and firearms.

### SITUATIONAL AWARENESS

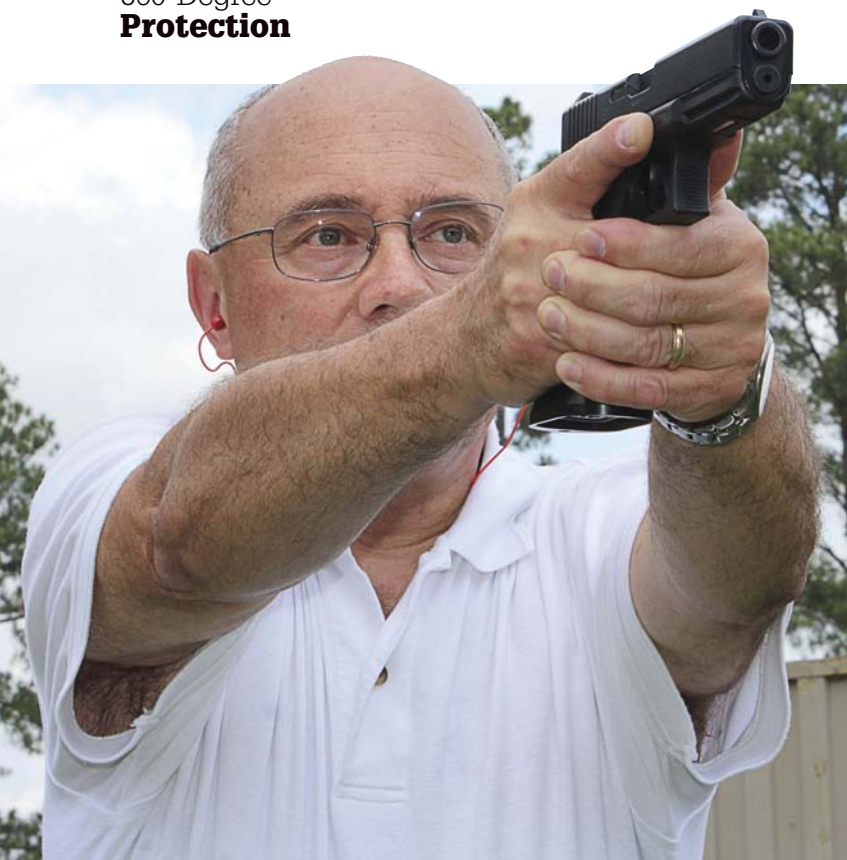
In familiar surroundings we all tend to be too lax and comfortable. It can be easy to not take notice of potential threats. In emergency situations – when you're lost, when you have to bug out because of a natural disaster or civil unrest – you are alert, but your senses can easily become overloaded. Your ability to distinguish real danger from what merely seems frightening can be compromised.

Don't be an easy target. You have to become accustomed to recognizing signs of impending danger. Do you think someone is following you? Are you suspicious of the group of men at the corner or in the alley or on the trail ahead? Alter your direction. Are they reacting to it?

No one is saying you should walk around in a continual state of paranoia. But you shouldn't be staring constantly at your cell phone screen either. Stay alert to your surroundings and follow your gut instincts. If walking into a situation is giving you the creeps, pay attention to that feeling and avoid that situation.



It's good to have non-lethal options at your disposal for some self-defense situations. Here, pepper spray (left) and a stun gun (top) may be more appropriate in some situations than the gun or knife.



If a handgun is part of your overall self-defense preparedness plan, getting the best training is critical. Dedicated yourself to putting in lots of practice time at the range is also important.

"YOU DON'T WANT TO BRING ONLY A KNIFE TO A GUN FIGHT,  
BUT YOU MIGHT WANT TO BRING A GUN AND A KNIFE TO A GUN FIGHT."

## FIGHT VS. FLIGHT

When should you stand and fight and when should you run? The old saying, "run away and live to fight another day," has some merit. Sometimes a "tactical retreat" is a wise move.

You don't want to prolong a fight. Whether the confrontation is with fists or firearms, the longer it continues, the better the chance someone is going to get hurt. You don't want that someone to be you. You either have to put a decisive end to the fight or you have to retreat at the first good, secure opportunity.

Don't worry about your pride. Fleeing isn't the coward's way out. Your goal is long-term survival. You

don't want your opponent's friends to arrive on the scene and you find yourself suddenly out-numbered.

However, there are times when you have to stand and fight. If you're defending a fixed position, retreating might not be an option. If you are cornered or you are trying to save what's left of your food and water supplies, you might need to fight.

Often attackers are looking for easy victims. Showing you're vulnerable will often prompt an attack. There can be safety in numbers. But even if you are traveling alone, if you show them that they're in for a real struggle with an uncertain outcome, they might very well flee at the first opportunity.



A handgun on the hip may be comforting, but remember not all confrontations call for deadly physical force. You have to be well-rounded in your approach to self-defense. Simply owning a gun isn't enough.

If avoidance is not possible, you have to raise your level of readiness to match the heightened possibility of imminent danger. You might unzip your jacket so you can reach for your handgun more easily if necessary. You might put your hand in the pocket where you keep your pepper spray.

Learn to be ever watchful and alert and soon your inner alarm system will be running automatically, much the same way programs are running in the background on your computer.

## HAND-TO-HAND TACTICS

Owning a gun cannot be your only answer to a self-defense situation. In a true survival situation, you must do what is necessary to survive, but not every instance calls for lethal force.

If someone shoves you or punches you, drawing a gun in response can get you in real trouble once order is restored. Chances are greater that you'll have to fight your way out of trouble without using your firearm.

Not all of us are destined to become martial arts experts. I'm not, maybe you're not either. But that doesn't mean you can't learn a few things along the way. There are ways to use leverage and an opponent's momentum against him, but that takes training and practice. As with anything else, it's best to train with





If your self-defense options include a long gun, be aware of its advantages and disadvantages. It may offer better stopping power and you might be more accurate with it at longer ranges, but it can be difficult to maneuver in close quarters and it's more difficult to conceal.



**[ABOVE]** Not so vulnerable. If you can't talk your way out of trouble or avoid it, be prepared to meet force with force. Here, the mere display of a hatchet can turn the tables and send a would-be attacker looking for easier prey. **[LEFT]** A knife is about to be used to slash at an attacker's wrist to keep him from getting the gun away from the legally-armed citizen. The knife is not obsolete merely because you're carrying a gun.

## The Warrior Mindset

Carrying or stockpiling weapons is useless unless you have the mindset to use them. Will you strike without hesitation when violence is imminent? Learn to recognize when you are not going to be able to talk your way out of a conflict. Then be decisive. Take the fight out of your opponent by striking hard, fast and repeatedly. Many times if he quickly realizes that you are not the easy target he took you for, he'll be the one looking to make a hasty retreat.

It's easier to make the transition from verbal negotiation to physical confrontation if you have experienced it before. Redirect time and money from your other recreational activities and take some martial arts lessons. Learn how it feels to get poked on the nose and knocked down. Learn to keep fighting through discomfort and pain.

Go hunting and experience a kill first-hand. When your life is on the line, it's no time to be squeamish or reluctant.

### IMPROVISED WEAPONS

Sticks and stones can break your bones, so don't hesitate to use what's around you to win a physical confrontation if you are without conventional, dedicated weapons.

Think about it. People were using improvised weapons for thousands of years before firearms were invented.

Keys, ballpoint pens, pointed or high-heel shoes, the leg of a chair, glass bottles and, of course, sticks and stones can all be used as weapons. Household items – kitchen knives, scissors, baseball bats, pipe wrenches, pry bars – can all be effective weapons. Insecticide, ammonia or bleach sprayed in an attacker's eyes can slow him down.

Remember, simply having these items is no guarantee of success. Swinging a weapon wildly may only prompt an attacker to take it away from you and use it against you. This is where martial arts training can pay dividends. Improvised weapons in the hands of trained warriors can be deadly.



Improvised weapons gathered from common household items can be just as deadly if you're prepared to use them without hesitation when your life is on the line.

the professionals. It will be time and money well-spent.

Sometimes when sizing up an opponent, instead of becoming intimidated by his size and strength, it helps to look at him as a set of weak spots: his eyes, nose, throat, groin, knees. Target those weak spots and you might be able to slow him down enough to enable you to retreat.

### LESS-THAN-LETHAL WEAPONS

Pepper spray and stun guns, where legal, can be good options as long as they're not your only options. Stun guns can be effective at close range, but won't help you against multiple attackers or a gunman 10 yards away.

Pepper spray is also a close-range device that can slow an attacker's advance, allowing you to counter his attack, escape or gain access to another weapon. Don't rely too heavily on it, however. While I've seen some people drop like a rock on getting sprayed, I've seen plenty of others continue unaffected.

### EDGED WEAPONS

You don't want to bring only a knife to a gunfight, but you might want to bring a gun and a knife to a gunfight. In many places carrying a firearm is not an option, so a knife can be a good alternative.

If you are carrying a knife everyday as a tool, why not carry one that also is designed to be a

good weapon? If you're struggling with an attacker who is trying to grab your gun from its holster, a timely slash across his wrists with your knife can prevent him from shooting you with your own weapon.

### FIREARMS

A tiny firearm you always have with you is worthless if you can't bring it to bear quickly and effectively or if you can't make an accurate shot under pressure to your adversary's vitals.

At the same time, a larger firearm you shoot well at the range is equally worthless if you never carry it with you.

Carrying a firearm requires a commitment. When you carry it regularly, it quickly stops being an inconvenience. Soon you'll feel undressed if you don't have it with you. However you decide to carry your gun, make sure you can access it quickly and smoothly when someone is bearing down on you.

Find a place where you can practice shooting and moving, using cover and firing from unconventional positions. Practice shooting one-handed, with both your right and left hands. Practice reloading in the dark. **ASB**

**About the Author:** Steven Paul Barlow is a retired sergeant/station commander and former firearms instructor with the New York State Police. An avid hunter and firearms enthusiast, he has been writing on outdoor topics for more than 30 years.



## Weather

**Weather is an unavoidable variable to any outside activity, be it a leisurely hike or a strenuous survival situation. It can be a blessing or a scourge, depending on your circumstances, and if you are stuck out in it, it is best to be prepared for the worst. Weather can change from moment to moment, especially if you are in unfamiliar territory.**

▶ Temperature falls at a more or less constant rate with increasing altitude — about 1 degree F for every 300 feet in elevation. Wind is forced by the mountain to rise and cool, causing higher precipitation on windward mountain slopes.

— XAVIER MANIGUET,  
SURVIVAL: HOW TO PREVAIL IN HOSTILE ENVIRONMENTS

▶ Do not eat snow or ice. The energy lost during this process is not equal to the benefit. Melt the snow or ice first.

— CREEK STEWART,  
BUILD THE PERFECT BUG OUT SURVIVAL SKILLS

▶ A whiteout makes travel extremely difficult and dangerous. If one occurs, play it safe by building a shelter and staying put until the conditions clear up.

— GREG DAVENPORT, SURVIVING COLD WEATHER

▶ Avoid heatstroke by soaking a disposable diaper with water and placing it around your neck. Your skin will absorb the water via osmosis and the cooled polymer absorbent material is cool to your skin.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ Padding the space between your body and your clothes with bubble wrap or crumpled up newspapers provides insulation. Your body will raise the temperature of the air layer.

— CHRISTOPHER NYERGES, HOW TO SURVIVE ANYWHERE



▶ To help prevent hypothermia, trace each foot on a piece of aluminum foil. Cut out the pattern and place them inside your boots with the shiny side up. The heat from your feet will add extra warmth to your footwear.

— JOEY GREEN, LAST-MINUTE SURVIVAL SECRETS

▶ Your need to drink lots of fluids is as great in a cold environment as it is in a hot one. One way to tell if you are becoming dehydrated is to check the color of your urine. The darker the urine the worse the dehydration.

— CHRISTOPHER NYERGES, HOW TO SURVIVE ANYWHERE

▶ Clouds that look happy or ominous usually do exactly what you expect them to do.

— ROBERT PELTON, COME BACK ALIVE

▶ Cumulus clouds, when low in the sky and looking like cotton balls, are also called trade-winds clouds. They portend good weather to continue. If they develop significant vertical growth with dark, horizontal bottoms and white tops, they portend heavy showers with gusty surface winds.

— REID KINCAID, THE EXTREME SURVIVAL ALMANAC

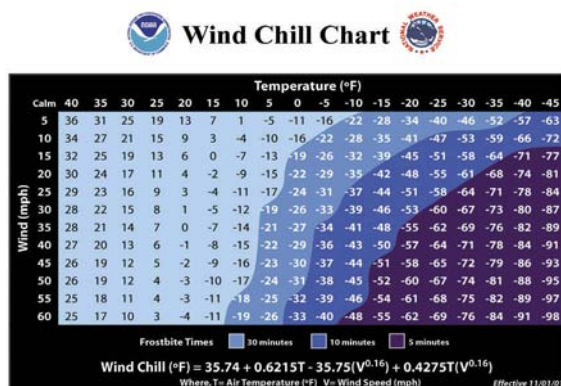
▶ If you find yourself outside during a lightning storm, you do not want to be the tallest object or even near the tallest object. Avoid solitary trees, open spaces, high ground, and hilltops. Instead try to find a ditch, a low area, a clump of shrubs, or a group of trees with equal height.

— WARREN FAIDLEY,  
THE ULTIMATE STORM SURVIVAL HANDBOOK



### THE WIND CHILL FACTOR

As convection from a warm surface — such as your face — heats the air around it, a boundary layer of warm air forms against the surface. Wind disrupts this boundary layer and allows for cooler air to replace the warm air against the surface. The faster the wind speed, the more readily the surface cools. This chart from the National Oceanic and Atmospheric Administration shows the surface temperature of a person during various wind speeds and how quickly frostbite takes place.



# Gear Guide

## DEFENSE STICKS

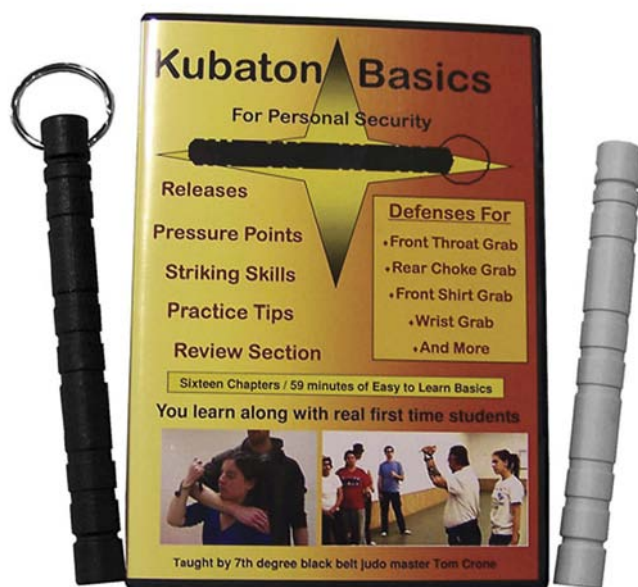
### Pocket-Sized Protection

Tactical Defense Sticks  
Pack a Powerful punch

Story by Michael D'Angona

CAN A SIMPLE STICK dish out the damage when danger strikes? The answer is...definitely. In the hands of a person with just some basic self-defense skills, a tactical defensive stick or baton can be your saving grace when an attacker has his sights on you. Though the variations are many, they all basically perform the same function: the striking of vital areas to either dissuade or subdue an attacker so you can make an escape. These vital areas include pinpoint hits around the face, eyes, throat, nose, and head area and throughout the body. Hits to the groin, knees, hands, and ribs can quickly stop the attack and allow you to escape to safety.

Like shooting a firearm with accurate results, practice is a must to get the full benefits of a baton or tactical stick. Instructional manuals, DVD's or, better yet, taking self-defense or martial art classes that include stick and weapon defense as part of their repertoire, are key to maximizing your results when using these effective hand-held weapons. With weapon in hand and a little knowledge under your belt, your attacker will wish he picked another target.



#### Kubaton Basics DVD Kit

You are not born with self-defense skills. In order to properly defend yourself you need training, and the Kubaton Basic DVD kit provides all the basics strikes, defenses, and pressure points using this simple, yet effective weapon. Taught by 7th degree black belt and judo master, Tom Crone, this kit includes a 59 minute DVD, a 6 inch rubber training kubaton and a flat-ended 6 inch ready to use keychain kubaton. The lessons are especially designed for those with no prior knowledge or training in the use of the kubaton and comes complete with instruction on releases, pressure points, striking tips and more. Defend against such attacks as a front grab, a rear choke, a wrist grab and many others. Take the first step with this wonderful introduction to an amazing compact defense weapon.

Source: [AlphaInnovations.com](http://AlphaInnovations.com)  
MSRP: \$28.75

### PURCHASING SOME PROTECTION

When choosing which baton or defensive stick (or kubaton, as it's also called) is right for you, it is important to physically handle and "try-out" the item first before purchasing. Does it feel right when you grip it? Does the weight work well with your strength level? Can you conceal and store it easily for quick access? Remember, any weapon you use for self-defense is just an extension of your own body, so you must feel comfortable wielding it.





### Self-Defense Keychain

Compact, discreet and ready when you need it, this self-defense keychain is always easily accessible and ready to surprise whoever decides to assault you or a loved one. Few will notice this item hanging from your keychain, but when push comes to shove its true ability will definitely become apparent. Hold the mini-baton firmly in the palm of your hand and strike your attacker with the corner of the exposed end. This small and distinct striking point will increase your own striking force and cause much more damage than anyone would ever suspect. Focus your repetitive hits on your opponent's facial area, his throat or even his groin. Use your forearm and the tip of the defensive stick to scissor lock his neck or arm and apply pressure to make him release his grip. Solid metal construction with a sleek black finish.

Source: **AWMA.com**  
MSRP: **\$5.95**



### Automatic Baton with Sheath

Just the intense popping sound of this automatic extendable baton can bring a tinge of fear to your attacker. This three-sectional baton extends with just a touch of a button and fully locks into position within a fraction of a second. Use it to defend against an armed attacker or as an effective offensive weapon when the tide turns in your favor. This compact baton fits easily in its included leather sheath and its belt loop ensures this weapon will be nearby whenever danger strikes. This is the perfect concealed weapon for those who don't carry firearms, but want reliable easy to operate, personal protection. 20 inches overall when opened and only 6 1/2 inches closed.

Source: **BudK.com**  
MSRP: **\$29.99**

### Solid Steel Baton

Easily concealable in your back pocket, this telescoping solid steel baton will give you an edge when faced with an oncoming attacker. Using only a flick of your wrist, this baton extends and locks to a full 21 inches and allows you to defend or attack with relative ease. Its cushioned hand grip ensures your weapon will stay put allowing you quick and fast strikes. Use the solid steel tip to target your attacker's key body parts including his knee joints, his head, his wrist and hands, and groin. When closed, this unit fits easily in nearly any pocket, purse, and supply bag or on your belt with its included quick release sheath. The baton is coated in a black, non-glare finish for reflective-free operation.

Source: **BudK.com**  
MSRP: **\$26.99**





### Impromptu Tactical Pen

Writes like a normal pen? Yes, but it does a whole lot more! This tactical pen is created from machined steel and built super tough. Its tip is designed to shatter windshields for a quick escape, as well as defending yourself from an unexpected attack. Use its stout design to apply pressure point attacks to your assailant or to quickly stab at his eyes or throat. The pen itself features a reliable push-button mechanism and its "Rite in the Rain" ink cartridge functions even in the worst conditions, inside and outdoors. The included pocket clip attaches easily to nearly any pants or shirt pocket. Backed by Gerber's lifetime warranty. Made in the USA.

Source: [GerberGear.com](http://GerberGear.com)  
MSRP: \$71.99



### Ninja Keychain

Don't let the name fool you. This is no novelty left over from the ninja craze years ago. This keychain can provide you with quick and simple-to-use self-defense whenever danger may strike. Utilizing a one-piece solid metal construction, this key chain attachment easily fits between your fingers enabling two directional striking without altering your grip. Two tapered prongs protrude over your hand to hit your attacker's vital areas including his eyes, throat and rib cage. The thicker slightly pointed end works well against his pressure points and to apply a power blow to his arms, legs or anywhere your need to disable in a flash. Extremely easy to use for both men and women.

Source: [AWMA.com](http://AWMA.com)  
MSRP: \$4.50



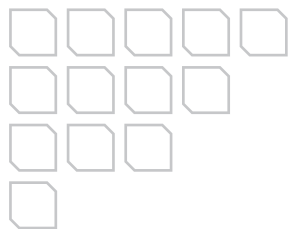
### African Walking Stick

Carry the same type of walking stick as the Zulu people of Africa, but now with modern and updated features. This one-piece walking stick is constructed from unbreakable polypropylene. It resists rot, warping, cracking, splintering, and molding and will not fade even in high sunlight. Walk confidently with this tool, as you maneuver your terrain and protect yourself from others out to do you harm. Its rounded multi-faceted hand holder makes a formidable striking tip if or when you get attacked. Use the ground-based tip to jab or strike at your opponent. Multi-functional and ready for whatever you face during your travels.

Source: [coldsteel.com](http://coldsteel.com)  
MSRP: \$42.99







### Aluminum Stylus Sized Kubaton

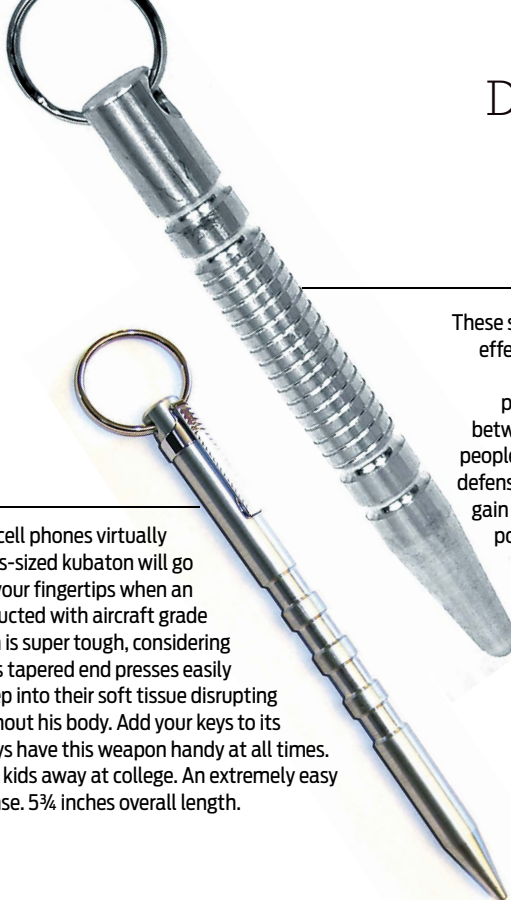
With electronic tablets and large cell phones virtually everywhere these days, your stylus-sized kubaton will go unnoticed by many, but ready at your fingertips when an unprovoked attack occurs. Constructed with aircraft grade aluminum, this defensive weapon is super tough, considering it's only 3/8 inches in diameter. Its tapered end presses easily against an attacker's joints or deep into their soft tissue disrupting the pressure points found throughout his body. Add your keys to its included key ring so you will always have this weapon handy at all times. Great for men, women and grown kids away at college. An extremely easy to use, non-lethal means of defense. 5 3/4 inches overall length.

Source: [AlphaInnovations.com](http://AlphaInnovations.com)  
MSRP: \$12

### Aluminum Keychain Kubatons

These stylish, durable and highly accessible weapons are a very effective means of dealing with an unexpected attack. Constructed of high density aluminum and sporting either a pointed or flat end, this kubaton can mean the difference between making it home at night or not! Designed for use by people with relatively no experience in the martial arts or self-defense, this weapon offers easy to use striking movements to gain control of your opponent. Use it to disrupt vital pressure points, lock finger joints, gouge eyes and jab at your opponent's throat. It is highly effective at causing temporary paralysis and extreme pain when struck against the nerves and soft tissue of the body. Comes with a key ring, so you will always have this crucial defense item nearby. Available in four distinct colors.

Source: [TBOtech.com](http://TBOtech.com)  
MSRP: \$4.95





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## DEFENSE STICKS



### The Key Self-Defense Keychain

Discreet and effective, The Key is an improvement in form and function of the original kubaton weapon. Constructed of durable material, this personal self-defense tool can dish out a considerable amount of damage if needed. Its unique design offers an easy grip from almost any angle and provides pinpoint striking to your assailant's vital areas. Single blows to the head, hand or pressure points located all throughout the body can be sufficient to stun your opponent and allow you time to get away to safety. Created by a martial arts black belt and 20 year veteran of the police force, this item does the job well without attracting undue attention due its almost toy-like appearance. Available in three distinct colors, black, granite grey or granite rose.

Source: [KeySelfDefenseProducts.com](http://KeySelfDefenseProducts.com)  
MSRP: \$9.95

### Pink Telescoping Baton

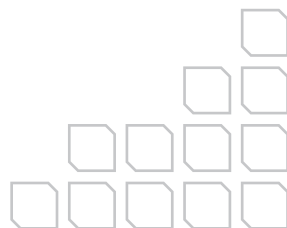
A perfectly-sized self-defense weapon for a lady's purse, this telescoping baton is not only stylish with its pink accents, but also highly effective to put would-be attackers in their place. Constructed of solid steel and chrome with a rubberized pink colored diamond-grip, this weapon is perfect for a woman to defend themselves against knife wielding assailants and multiple groups of individuals out to cause serious trouble. A few quick hits from the rounded solid steel tip will cause intense pain and possibly crippling breaks to the nose, joints and skull of anyone foolish enough to make the wrong move. Closed: 8 inches, Open: 21 inches. Includes a heavy duty nylon holster with convenient belt loop.

Source: [TBOTech.com](http://TBOTech.com)  
MSRP: \$28

### Rubber Training Kubaton

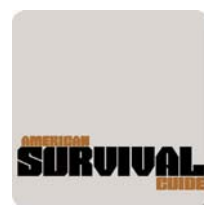
Becoming natural using any weapon, kubaton included, takes practice and plenty of it. Luckily for you and your partner, using this rubberized practice kubaton can make your training sessions less painful when learning the necessary techniques. Constructed of hard rubber, this practice aid is rigid enough for applications, yet flexible enough to be used for repeated striking without injury to either practitioner. The kubaton exhibits all the same characteristics of the actual weapon, so making the transition to using the "real deal" will be seamless. A must-have for anyone wanting to hone their self-defense skills! 6 inches long and 5/8 inches in diameter.

Source: [AlphaInnovations.com](http://AlphaInnovations.com)  
MSRP: \$7





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# Quick Kit

## POCKET SURVIVAL PAK PLUS: WELL-HEELED BUT COMPACT

Story and Photography by William "Billy" Boggs

Highway 266 is a dusty two-lane road stretching west though the barren Nevada desert toward the California state line north of Death Valley. The blacktop spreads over the horizon; thistle, cactus, and pygmy cedar spring from the flat sandy landscape, but the unforgiving desolation is what attracted you to this shortcut from the 95 to the 395 and eventually south to Los Angeles. A motorcycle ride with no traffic, stoplights, or people can make for a relaxing afternoon, provided everything goes smoothly. However, a tire puncture from an errant screw leading to a bent fork and damaged wheel will suddenly change your plans and put you in an unforeseen survival situation.

When was the last time you saw a car go by?

You're stuck on the 266 just south of Palmetto Mountain and civilization is 40 miles in either direction. The saddlebags on your bike contain a change of clothes and some random things you picked up from your trip, but it also contains a SOL Pocket Survival Pak Plus from Tender, a gift from a friend who knew you liked the road less traveled but don't like to carry a lot of gear. SOL stands for Survive Outdoors Longer, and since 1975, the Tender Corporation has been producing well-known insect repellents (Ben's and Natrapel) and well built first-aid kits under the Adventure Medical Kits line.

Armed with this small kit full of very useful tools, making your way into

the wilderness — in this case, one of the world's dangerous deserts — is slightly less unnerving. Though only 4.5 x 5 inches and less than 2 inches thick, the kit weighs a scant 6.2 ounces, light enough to carry in a jacket pocket with little notice. Packed in a waterproof pouch, the front of which is clear TPU plastic so you can, at a glance, see its contents and know exactly what you have the moment you need it, while the reverse is bright orange 40D ripstop material.

Based on of SOL's very popular Pocket Survival Pak, the Plus model was designed by Doug Ritter, the Executive Director of the Equipped to Survive Foundation. It enjoys the addition of a CRKT RSK-Mk5 knife, a SOL LED micro-light, Katadyn's MPI water



eGear Pico Lite is an LED flashlight designed for this kit by Doug Ritter. It is made of water-resistant anodized aluminum with a rotating bezel on/off switch. It produces 10 lumens of light with a 30-foot reach. At only 1.5 inches long, it uses four LR41 batteries and can last up to 15 hours.



The 150-lbs. test-strength braided nylon cord has a variety of uses. At 10 feet in length, it won't unravel.



The Fox-40 Rescue Howler survival whistle was originally designed exclusively for this kit; with a triple frequency it exceeds U.S. Coast Guard and Safety of Life at Sea (SOLAS) specifications, comes in bright yellow and has a ring for a lanyard.



The aluminum foil can be used for cooking or as a small bowl to hold water or other liquids. The 26 inches of duct tape is wrapped around a small plastic mandrel and can be used in countless ways.



Katadyn provided six MP1 water purification tablets. Individually sealed, one chlorine dioxide tablet purifies one liter of water.



Starting a fire can be had from two different methods, the 2 x 3-inch Fresnel lens or the Spark-Lite Firestarter and the four pieces of water-proof Tinder Quik.



The jewel of the kit is CRKT's RSK Mk5 survival knife, a 0.9-ounce drop-point blade made from 2C413 stainless steel (52-55 hardness).



The 28-inch ballchain, six feet of stainless steel safety wire, and the 50 feet of bobbin #69 nylon sewing thread will come in handy for repairs or to keep items like the whistle and signal mirror around your neck and readily available. The incredibly thin pencil, paired with the water-proof paper, can be used to keep notes or create a journal.



Inside a neatly organized plastic tube is stored the #10 fish hooks, safety pins and #16 heavy-duty needle.



The 20mm button-style compass is handy at finding direction. It is liquid-filled and has a means of attaching to a lanyard.



The Rescue Flash signal mirror is made of Lexan polycarbonate with a military spec retro-reflective aiming aid for one-handed use. Instructions are on the back.

purification tablets and a one-liter collapsible water bag as well as detailed instructions written by Ritter.

On a flat rock, you lay out your extra shirt and spread out upon it the 24 items that will help you overcome a situation getting more dire as the day heats up. You quickly divide the gear into major categories.

## SIGNAL

An important aspect of becoming found or gaining the attention of would-be rescuers is a proper means of signaling, and the Pocket Survival Pak Plus comes equipped with two. The mirror is a Rescue Flash signal mirror made from Lexan polycarbonate is designed to be used with one hand via the retro-reflective aiming aid. The Fox-40 Rescue Howler survival whistle was designed specifically for this kit. It is a pea-less whistle that

emits 110 decibels of ear-splitting sound for over a mile of flat terrain.

## TRAVEL

The majority of lost hiker scenarios — the prime reason this kit was established — involve travelling of some sort, either to meet up with rescuers or the very process of scrambling your way out of a situation. With a 20mm button compass, finding your direction is easy, and the waterproof paper and tiny pencil are handy to make notes and/or keep a journal of your ordeal. If you don't make it, at least there will be a record of it. The eGear PICO™ Lite LED flashlight was designed by Doug Ritter as well, has a lifespan of 15 hours and is activated with a twist. The batteries are replaceable and it would work wonders as a signaling device as well as lighting up the dark desert skies.

An indispensable tool that needs to be in every survival kit you own is a sturdy knife. This one, the CRKT RSK Mk5, was designed by Doug Ritter and is compact enough to hang from the ball chain or merely slipped into your pocket.

## REPAIR

In our situation here, this kit wouldn't do much to help repair the one piece of equipment that would ferry us to safety (the bike), but then again, no survival kit comes equipped with an air pump and wheel straightening tools. However, ripped clothes and damaged tools (or the need to fashion some — say a fire bow or a spear) is made a little easier with needle, 50 feet of black nylon thread, and four safety pins. However, as proven in a multitude of ways, the 26 x 2 inches of duct tape can be invaluable to repair or improvise a variety of things.

“...THE BASIC ELEMENTS NEEDED FOR SURVIVAL — FIRE, FOOD, WATER — CAN BE HAD BY MULTIPLE METHODS, SO IF ONE FAILS OR IS UNAVAILABLE, THERE IS ALWAYS A BACKUP WAITING.”

### FOOD & DRINK

Depending on your time spent in the wilderness, attention might soon be directed to finding food and water and preparing it to eat. If you are hungry enough, you can eat anything raw and worry about the consequences later (bacteria, et al); however, cooking your food over a fire is safer and the food will taste much better. Facilitating this is are four fish hooks and weights, and there are a few ways of casting a line, either from the 10 feet of braided nylon cord (150lbs test), the 50 feet of nylon thread (10.5lbs test) or the six feet of stainless steel utility wire. After it is caught or trapped, the animal or fish can be cooked in the three-square-feet of aluminum foil over a fire started by the Spark-Lite Firestarter.

For drink, the kit includes Katadyn's Micropour MP1 water purification

tablets; the six tablets can treat six quarts of water in the provided collapsible one-liter water bag with a sealable closure.

### FIRE

There are two different ways to make fire using this kit. The aforementioned Spark-Lite Firestarter was tested to 5,000 sparks, is part of the current U.S. military issued gear and can easily be used with one hand (picture a lighter without the fluid). Whereas, in the desert, a convenient tool where sunlight is readily found, is a Fresnel lens that focuses the sun's heat into a very small area. So starting a fire is quick and easy. To help with this, four waterproof pieces of Tinder Quik are included, which will ignite easily (with the Spark-Lite) and stay lit for up to three minutes.

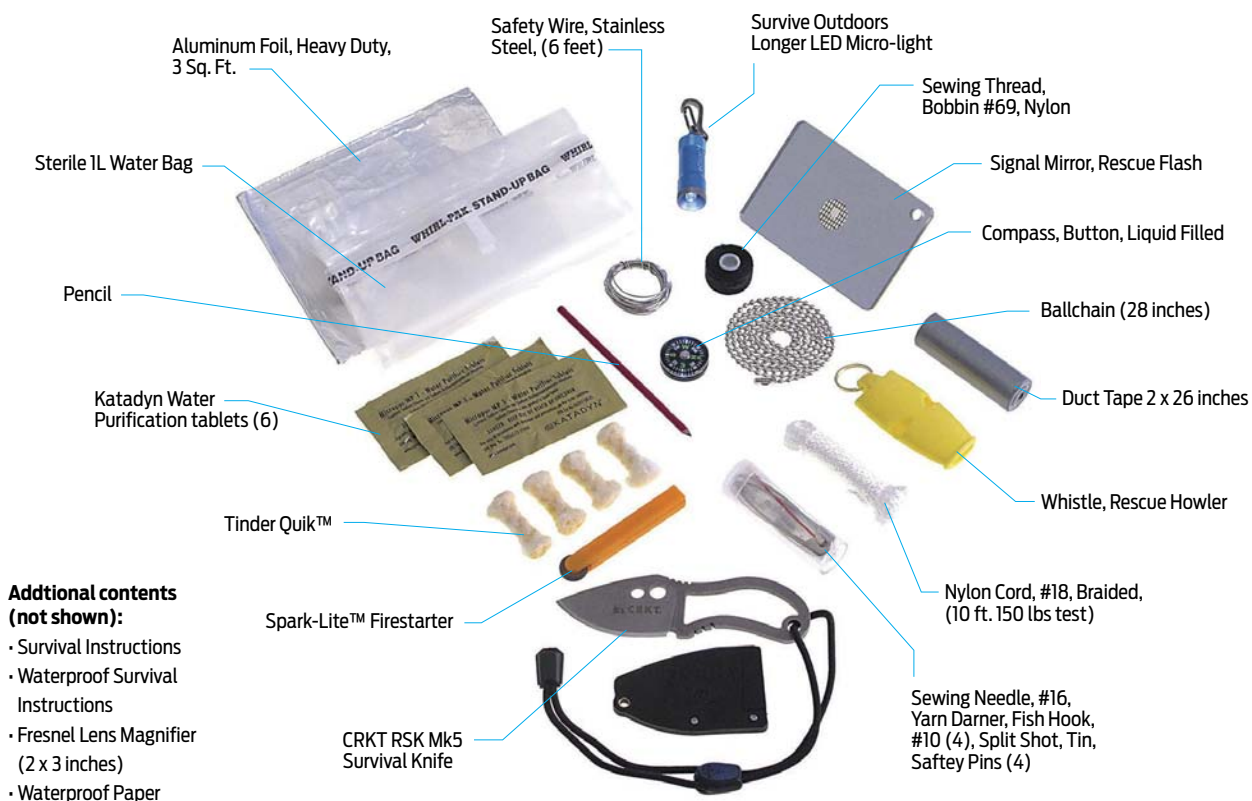
### CONCLUSION

Undeniably, the Pocket Survival Pak Plus was designed with survival in mind. The star feature of this kit isn't necessarily any particular item in it — they all perform flawlessly at their multi-tasks — but instead the ability to pack together so many different items into such a small space. The basic elements needed for survival — fire, food, water — can be had by multiple methods, so if one fails or is unavailable, there is always a backup waiting. Having this in an emergency situation will definitely help you Survive Outdoors Longer. **ASL**

### SOURCE

surviveoutdoorslonger.com | MSRP: \$80

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# Edible Malva Parviflora

THE COMMON MALLOW IS EVERYWHERE | Story and Photography by Christopher Nyerges



**B**efore I'd ever seen a mallow plant, I studied pictures in plant manuals and read that it's one of the commonest wild plants of vacant lots and fields. I had a clear mental image of the leaf – roundish in outline, divided into seven to eleven shallow lobes, with a margin of small teeth. It had a long leaf stalk. If the plant grew “everywhere,” why hadn't I ever noticed it?

A wild food foraging friend of mine called me one day in the mid-1970s. He and I had both been relatively new botany students, and we would share our new findings with one another. He said that he'd located a field of mallow, and that he was willing to take me there. We quickly bicycled to the east side of Pasadena to a vacant lot. This was after the winter rains, and the lot was entirely covered in green “mounds,” rising up to perhaps three feet.

“That's all mallow,” he told me excitedly.

No wonder I wasn't noticing mallow. I was looking for a single plant, not a mass of green where all the plants are growing thickly together. I got off my bike and examined a leaf. Yes, each leaf was just as I'd memorized it: roundish, shallow lobes, a margin of small teeth, dark green. I looked for and noted the small red spot on the upper surface of the leaf where it meets the stem. As I studied the leaf, I realized no amount of book learning could ever substitute for direct field experience. Though all the pictures – line drawings and photos – I'd studied of mallow were accurate, I still did not know mallow until this moment of actually seeing it in its natural state.

I then instinctively tasted a bit of the leaf. It was a bit tough, not strongly flavored one way or the other. You could call it bland. As I chewed, I detected the slight slimy quality that has led to its long-time use in Mexico for coughs and sore throats. The tea has also been used in Mexico as a wash for diaper rash.

Interestingly, because the plant is often growing in the poorest hardpan soil, Southwestern potters sometimes look for mallow as an indicator of where they might find suitable clay.





Mallow leaves are edible raw in salads and they impart a slightly mucilaginous texture. The leaves are commonly cooked and eaten like spinach; they can also be added to soup. I have tried using the mallow leaves as a substitute for grape leaves in the rice dish known as “grape leaf” (or dolma) in Mediterranean foods. If you prepare it as you’d have prepared a regular grape leaf, it makes a good substitute.

The leaves can be dried and infused into tea, and although bland, are a good source of vitamins and minerals. In the Mexican herb shops you can find dried mallow leaves (called “Malva”) which is infused for a beverage used to treat coughs and sore throats.

Overall, the mallow leaf resembles the leaf of the nasturtium, a common garden plant which also grows wild along the Pacific coast. They both have round leaves with long stems. However, nasturtium is light green, with an entirely round leaf, devoid of teeth, with a stalk attached on the underside of the leaf. Mallow, by contrast, has a cleft where the leaf is attached, and it’s a much darker green color.

According to the USDA, 100 grams (½ cup) of the mallow leaf contains 249 milligrams of calcium, 69 milligrams of phosphorus, 2,190 I.U. of Vitamin A, and 35 milligrams of Vitamin C. An analysis of the same volume of mallow leaf by Duke and Atchley showed 90 milligrams of calcium, 42 milligrams of phosphorus, 410 milligrams of potassium, and 24 milligrams of Vitamin C. This second analysis also revealed 3,315 micrograms of beta carotene.

As I was examining my first mallow plant, it was late enough in the season to see some flowers and fruits. The flowers are arranged in clusters along the branches. There are bracts at the base of each of these rose-colored flowers, and each petal is notched at its

apex. The floral parts are five sepals, five petals about ⅜-inch long, numerous stamens, and one pistil. It’s a pretty little flower.

Circular flat fruits develop from the flowers. These ⅜-inch green fruits split, when ripe, into up to a dozen nutlets, resembling some packaged cheese; thus its common name “cheeseweed.”

I picked a few of these fruits and chewed them. They also have a bland flavor, perhaps a bit nutty. The mature fruits can be gathered, dried, and then the seeds separated from the chaff and other debris by winnowing it through a soft breeze. Then wash the seeds, dry them, and grind them for flour. An even easier way to use the mature seeds is to collect and winnow, and then simmer in water until they swell up. When cooked and soft, they can be seasoned (with butter, soy sauce, etc.) and then eaten like rice.

Mallow is common throughout most of North America and Europe. Though you find it most often in the disturbed soils around farms, and backyards, and urban vacant lots, it can also be found in some wilderness areas where the seeds have spread. It is worth getting to know because mallow can provide a minor addition to your meals or your medicine chest.

Mallow is an annual which comes up in late winter or spring after the rains, produces flowers and then its fruits, and by late summer it dies. However, when I pick the leaves and fruits of this plant, I never uproot it. I simply pick off the leaves or fruits that I intend to eat, and let the plant to continue to grow. I have observed that when I pick mallow leaves and fruits in this manner, they continue to live a month to two longer than the unpicked plants.

Perhaps most interesting is its relation to the Marsh Mallow (*Althea officinalis*), the root of which was boiled to yield a slimy, juice. This was whipped into a froth and made into a medicine for sore throats, bronchial troubles, and coughs. Today, “marshmallows” have no marsh mallow root extract, but are made of eggs, sugar, etc., and sold as candy. Common mallow root (*Malva parviflora*) will not yield a thick and slimy juice when boiled, but the green fruits (and the roots) can be boiled and the water beaten for an inferior substitute.

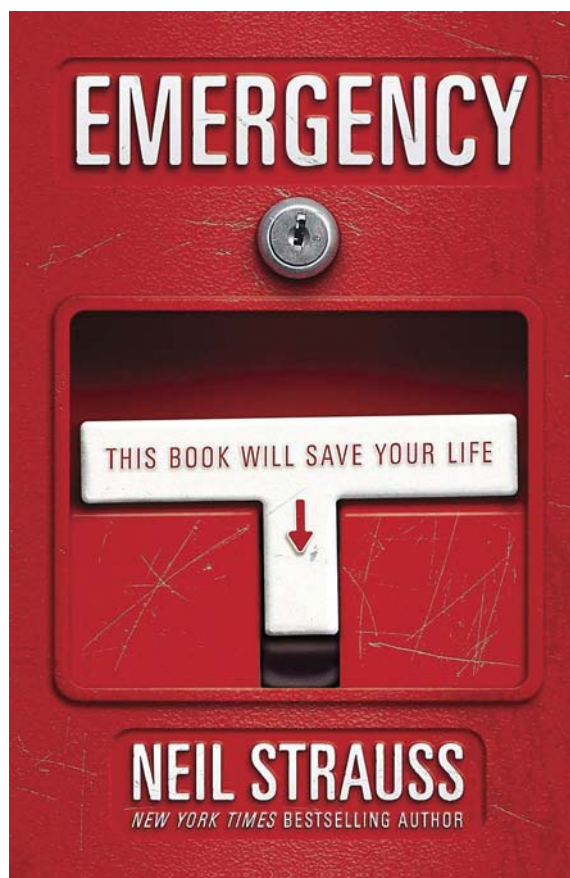
Originally from Europe, common mallow can now be found widely throughout North America, especially in backyards, gardens, vacant lots and cultivated fields. **ASB**

“MALLOW IS COMMON THROUGHOUT MOST OF NORTH AMERICA AND EUROPE. THOUGH YOU FIND IT MOST OFTEN IN THE DISTURBED SOILS AROUND FARMS, AND BACKYARDS, AND URBAN VACANT LOTS, IT CAN ALSO BE FOUND IN SOME WILDERNESS AREAS WHERE THE SEEDS HAVE SPREAD.”



# EMERGENCY

by Neil Strauss | Review by J.D.Hughes



**Maybe the paranoid** survivalist types were not as crazy as Neil Strauss thought.

Strauss is a long time writer for the *New York Times* who felt the election of George W. Bush was an indication of the coming end times, where intellectuals and political opponents would be rounded up by a right wing Gestapo and committed to re-education camps. He begins preparing to escape the coming conservative apocalypse. However, he begins to discover many of his comfortable assumptions about how the world works were wrong. Dead wrong.

Strauss begins his journey by trying to acquire a non-US passport, reasoning it will be easier for a foreign national to flee the country when the authorities are asking for "Papers please?!"

Strauss might be best known for writing *The Game*, an exhaustive investigation of pickup artist culture. Like *The Game*, *Emergency* is less a how-to book and more of a narrative of what he learned

from the experts. While waiting to get his passport, Strauss begins researching. He takes instructional courses to learn what he feels he needs to know to bug out when the time comes. He attends Tom Brown's Tracker School primitive skills course, CERT courses taught at the local fire department (which Strauss admits was only to acquire the emergency vest and helmet) and kills a goat to learn how to butcher it. Over the course of eight years Strauss learns how to take care of himself in ways he always assumed weren't necessary. After all, isn't that what the government is for?

The book is interspersed with well done comic book style instructional pieces, including "how to defeat attacking dogs" and "how to escape flex cuffs." There is a good deal to learn from the book and Strauss is an entertaining narrator. Definitely worth reading, even if you aren't afraid the next election will bring about the apocalypse. **ASB**



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# Frozen Survival

## A long-standing rumor

states Walt Disney's frozen corpse is being stored beneath the Pirates of the Caribbean ride at Disneyland. That rumor has teeth because just a month after Disney died, in January 1967, James Bedford became the first person to be cryogenically preserved. He is the first person to attempt to survive death.

The concept of cryonics, developed in part by Robert Ettinger and several others who have, over the years, joined him in a sub-zero state of preservation, was spelled out in Ettinger's book, *The Prospect of Immortality* in 1962. He suggested to freeze people's bodies in the hopes they can be thawed out in the future, when medical technologies would be better suited to cure what caused the death. Benjamin Franklin wrote about such hope in 1773, stating he wished to be preserved and revived to "see and observe the state of America a hundred years hence."

Thanks in part to ideas and support from various scientists, cryonics societies sprang up around the world, like Evan Cooper's Life Extension Society and William Katavolos's Cryonics Society of New York. These groups formed the basis for companies that developed the technology to cryopreserve human bodies.

## The Deep Freeze

After death, the body is cooled to 77.15 degrees K (−196 Celsius) in liquid

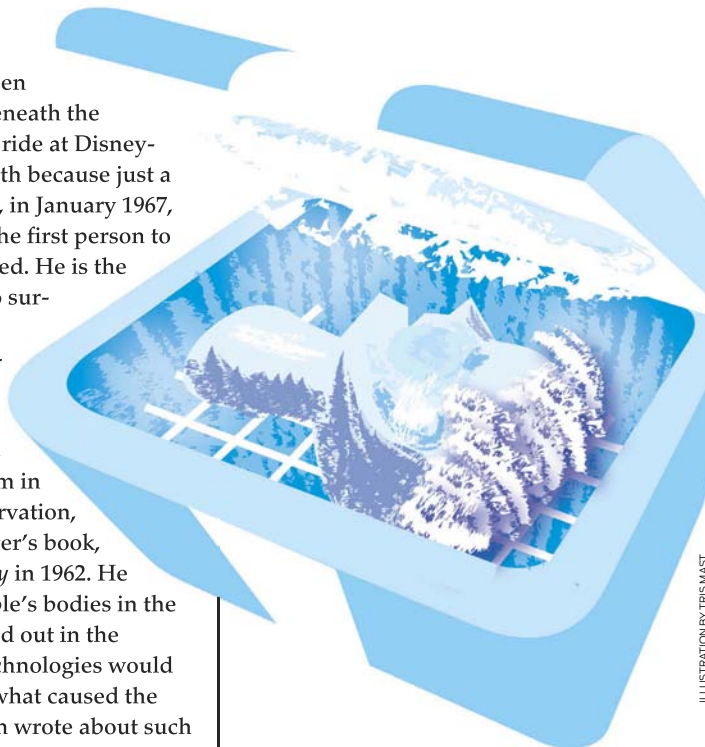


ILLUSTRATION BY TRIS MAST

## Six Celebrities Who Plan to be Cryopreserved:

1. Seth MacFarlane
2. Larry King
3. Simon Cowell
4. Paris Hilton
5. Muhammad Ali
6. Britney Spears

nitrogen. A cryoprotectant is pumped through the body to remove any water from the body's cells and tissue; this prevents them from forming ice when frozen, a process called vitrification. Experiments at university-level medical research facilities have replaced the blood of laboratory animals with cryoprotectants only to revive them later.

## Revival

Though expensive and quite a gamble, there is no current technology available to revive a person who has been cryogenically frozen for any length of time. However, many scientists believe the process very possible (while many don't) and are relying on future advances in stem cell tissue regeneration, molecular biology and nanotechnology, and even 3D biological printers to solve the problem. **ASB**

## Who's Who in the Freezer

Though a complete list is impossible due to medical privacy laws, some of the names of those who have been cryogenically preserved have been released:

**James Bedford:** a University of California psychology professor who died of cancer in 1967. Suspended in the Alcor Life Extension Foundation.

**Fred and Linda Chamberlain:** Founders of Alcor. Fred was cryopreserved in 2012.

**Dick Clair:** He was a TV actor and producer who was cryopreserved in 1988 at Alcor.

**L. Stephen Coles:** After he died in 2014, Coles, a scientist who studied supercentenarians, became Alcor's 131st inhabitant.

**Hal Finney:** A computer scientist, he was the first person to receive a Bitcoin transaction. He was cryopreserved in 2014.

**FM-2030:** Author and transhumanist philosopher, he didn't make it to his 100th birthday (hence his name change) but, in 2000, became the first person to be vitrified: a solution is added to the body to prevent crystallization.

**Curtis Henderson:** A pioneer in the practice of cryonics, he was cryopreserved at the Cryonics Institute in 2009.

**Dora Kent:** In 1987, Kent's headless body was at the center of a criminal investigation to determine if she was actually dead before being cryopreserved at Alcor.

**Ted Williams:** Famous Red Sox player and manager, he was preserved in 2002.



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